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ABSTRACT

This collection of papers reports the research done in the Department of Agricultural Education at the Ohio State University during the years 1986 to 1990. The studies, which provide information about rural schools and rural students; are as follows: (1) "Aspirations of Rural Secondary Students in Ohio" (J. David McCracken and Kerry S. Odell); (2) "Teaching in a Rural Community" (J. David McCracken and Charles Miller); (3) "The Ohio Rural School as Viewed by Community Leaders" (J. David McCracken); (4) "Vocational Agriculture in Rural Ohio Schools" (J. David McCracken); (5) "Gender Differences in the Aspirations of Rural Ohio Youth" (Kerry S. Odell); (6) "Implications for Colleges of Agriculture Based upon a Study of the Educational Plans of Rural Ohio Secondary Students" (J. David McCracken and Kerry S. Odell); (7) "Comparison between the 1985 and the 1988 Career Plans of the Same Rural Youth in Ohio" (J. David McCracken and Eric Fails); (8) "Participation in Vocational Education by Rural Public High School Students" (Jack Elliot and J. David McCracken); (9) "Characteristics of Rural High School Seniors in Ohio and Southwest Georgia" (J. David McCracken, et al.) (10) "High School Curriculum and Aspirations of Students in Ohio and Southwest Georgia" (J. David McCracken, et al.); (11) "High School and Student Characteristics in Rural and Urban Areas of Ohio" (J. David McCracken and Jeff David T. Barcinas); and (12) "Community and School Characteristics and Voter Behavior in Ohio Rural School District Property Tax Elections" (Matt Baker and J. David McCracken). (KS)

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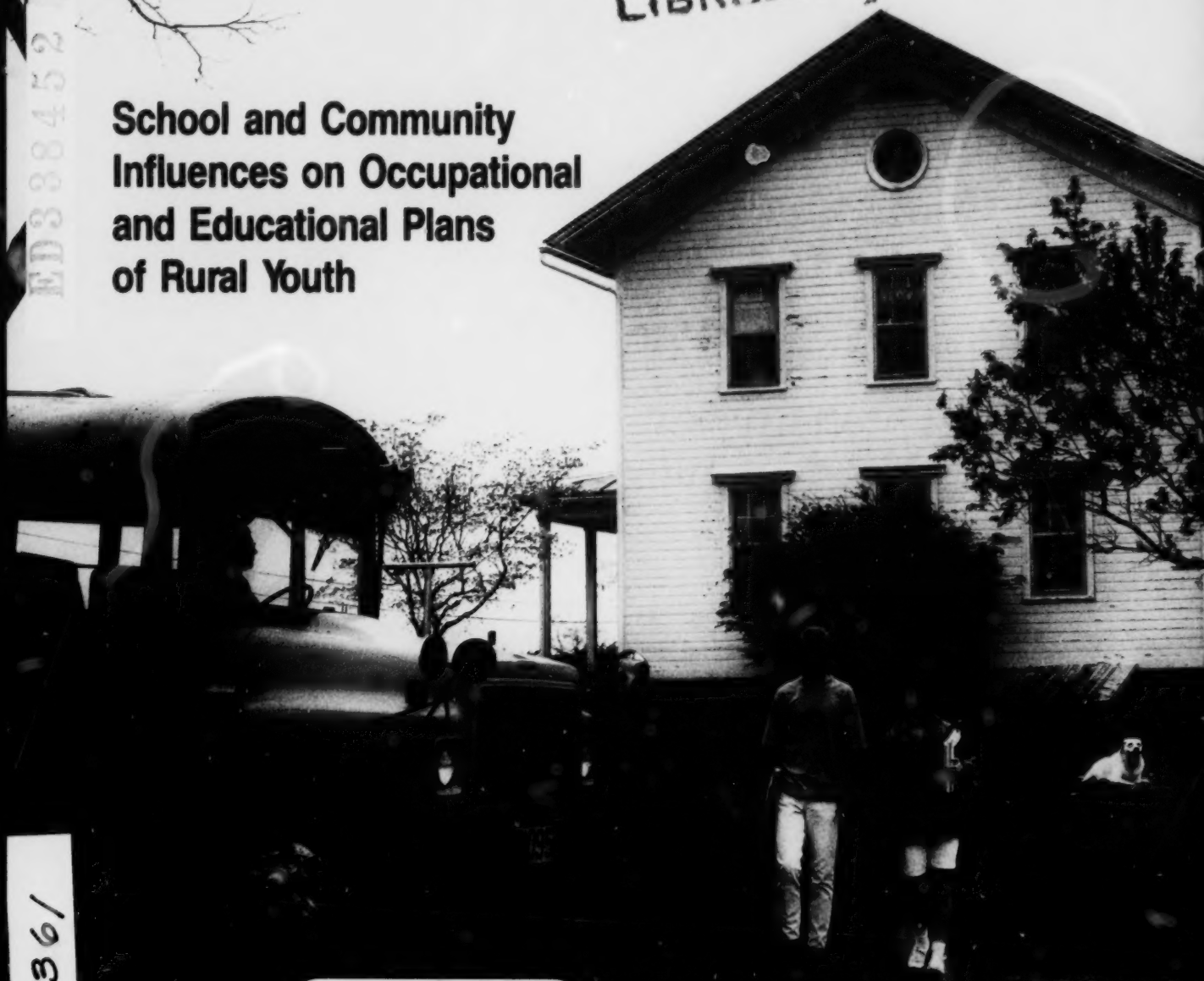

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EJ 383 464 CE 520 036

Career Aspirations of Rural Secondary Students. McCracken, J. David; Odell, Kerry S. *Journal of Vocational and Technical Education;* v5 n1 p3-12 Fall 1988

Descriptors: Secondary Education; *Rural Schools; *Occupational Aspiration; Rural Population; *Parent Influence; Sex Stereotypes; Career Choice

The career aspirations of 491 rural Ohio secondary students were identified. Results indicate that rural schools emphasize preparation for college attendance and that rural parents hold educational expectations for their children higher than their own attainments. Students also had high expectations, especially with regard to salary. (Author/CH)

EJ 392 621 RC 507 421

Rural Teachers' Perceptions of Their Schools and Communities. McCracken, J. David; Miller, Charles *Research in Rural Education;* v5 n2 p23-26 Spr 1988

Descriptors: *Rural Schools; Interviews; High Schools; *Secondary School Teachers; *Teacher Attitudes; *Teaching Conditions; Educational Research; *School Community Relationship; Public Schools; Rural Areas; Small Schools; *Teacher Role

Identifiers: Ohio

Reports on structured interviews with 24 teachers in 4 rural secondary schools concerning their level of satisfaction with teaching in rural schools, advantages and problems of rural schools and communities, factors helping or hindering better teaching, teacher role in curriculum development, and teacher extracurricular activities and outside jobs. (SV)

EJ 399 559 RC 507 573

Community Leaders' Perceptions of the Importance of Rural Community Schools. McCracken, J. David *Journal of Rural and Small Schools;* v3 n2 p12-15 Win 1989

Descriptors: Interviews; Qualitative Research; *Rural Schools; Small Schools; Rural Areas; *High Schools; *School Community Relationship; Community Leaders; *Community Attitudes

Identifiers: *Ohio

EJ 407 474 RC 507 780

Gender Differences in the Educational and Occupational Expectations of Rural Ohio Youth. Odell, Kerry S. *Research in Rural Education;* v5 n3 p37-41 1989

Descriptors: High Schools; Surveys; Sex Role; *Sex Differences; *Occupational Aspiration; Career Choice; *Academic Aspiration; Rural Schools

Identifiers: Ohio

Surveys educational and occupational expectations of students, grades 10 to 12, in four rural Ohio schools. Reports females show significantly higher educational and occupational aspirations than males. Areas of anticipated college study and occupational expectations are sex stereotypic; however, young rural women's occupational aspirations are broadening. Contains 21 references. (DHP)

Introduction

This publication is designed to report the research on rural education done in the Department of Agricultural Education at The Ohio State University during the years 1986 to 1990. Rural schools function in environments quite different from urban and suburban settings. These descriptive studies provide a great deal of information about rural schools and rural students.

"Aspirations of Rural Secondary Students in Ohio" was a study in which it was discovered that rural Ohio school students were found to have low socioeconomic status, be mostly white, and be primarily enrolled in the academic and general curricula. Students planned to obtain more education and work at a higher occupational level than their parents. Students were concentrating their occupational and educational aspirations in four career fields: education, engineering, business, and health. A majority of the students, even those enrolled in vocational education programs in high school, planned to enroll in some type of post-secondary program. A four-year college was the most popular option for vocational education graduates.

The advantages and disadvantages of "Teaching in a Rural Community" are reported based upon a qualitative research study. Most rural teachers preferred the rural community as a place to work and live. They were actively involved, beyond their classroom teaching role, in school and community activities.

"The Ohio Rural School as Viewed by Community Leaders" was another qualitative study based upon interviews in rural communities. Community leaders viewed the school as the nucleus of the rural community. It was concluded that the closing of rural schools due to consolidation would likely result in the demise of the communities served by the schools.

In a qualitative study of "Vocational Agriculture in Rural Ohio Schools," it was found that approximately 20 percent of the students enrolled in rural school vocational agriculture programs were in the college preparatory curriculum. Agriculture students were described as willing to work, friendly, helpful, concerned for others, and having self-sufficiency. Community support for vocational agriculture was perceived as strong.

A quantitative analysis of "Gender Differences in the Aspirations of Rural Ohio Youth" revealed that educational expectations of females were higher than those of males. Students tended to select sex stereotypic areas for college study and for occupations they expected to enter. A higher percentage of women than men planned to attend college. Women expected occupations of higher socioeconomic status than men but expected lower salaries.

The article titled "Implications for Colleges of Agriculture Based Upon a Study of the Educational Plans of Rural Ohio Secondary Students" reveals that only a small percentage of rural school students planned to pursue agriculture as an area of advanced study in college. The image of agriculture appeared to be closely tied to the agricultural economy. Rural students who graduate from college will have little opportunity to find employment in rural Ohio in the specialties they intend to study. This out-migration of the best young talent from the rural communities will deprive these areas of the leadership needed to develop their economic and agricultural potential.

A "Comparison Between the 1985 and the 1988 Career Plans of the Same Rural Youth in Ohio" discovered that student expectations increased to meet their aspirations with increasing maturity. They also expected higher salaries with increasing maturity.

A study of the "Participation in Vocational Education by Rural Public High School Students" reported that the reasons students choose to enroll in vocational education were: job preparation, enjoyment of vocational subject matter and the environment in which the vocational education courses were taught, personal reasons, monetary benefits, perceived ease of grades, attraction of youth organizations, preparation for further education, positive experiences with vocational teachers, and contacts with individuals in the vocational trades. Many students enrolled in vocational education for reasons other than job preparation.

In a study of the "Characteristics of Rural High School Seniors in Ohio and Southwest Georgia," large differences were found between the two groups. While educational and occupational expectations were higher in rural Georgia, the current status of schools and students favored those in Ohio. It was concluded that the aspirations of Ohio students appeared to be more realistic.

An analysis of "High School Curriculum and Aspirations of Students in Ohio and Southwest Georgia" was conducted and is reported in this publication. Females were more likely to participate in the academic curriculum than males. Socioeconomic status (SES) was different by curriculum of enrollment. Students in the academic curriculum were the highest in SES. Many students in the general and vocational curricula also planned to advance their education beyond high school.

In the article titled "High School and Student Characteristics in Rural and Urban Areas of Ohio," it was found that the cost per pupil in rural

schools tended to be much lower than in urban schools. Differences were also found between rural and urban schools in ethnic composition, curriculum in which students enrolled, socioeconomic status, and educational and occupational aspirations.

A study was conducted to examine potential relationships between "Community and School Characteristics and Voter Behavior in Ohio Rural School District Property Tax Elections." It was found that community and school factors were not good predictors of voter support in rural school districts. The strongest predictor of voter support was socioeconomic status of the residents of the district.

Aspirations of Rural Secondary Students in Ohio[1]

J. David McCracken and Kerry S. Odell
Department of Agricultural Education

The career aspirations developed and possessed by rural secondary school students during high school are believed to have a profound effect upon their eventual educational and occupational attainments. The purpose of this study was to identify the career aspirations of rural secondary school students in Ohio. The extent to which relationships existed between the career aspirations of this group and their background and school characteristics were also explored.

Objectives

Research questions answered by the study were: (1) what are the personal and educational characteristics of rural high school students, (2) what are the family background characteristics of rural high school students, (3) what are the characteristics of rural high schools, (4) what are the career aspirations of rural students, and (5) what relationships exist among the variables in the study? This study was descriptive and relational in nature, therefore no cause and effect relationships could be tested.

Present State of Knowledge

Aspirations have been shown to be among the most significant determinants of eventual attainment (Gottfredson, 1981). Among the first studies examining the aspirations of rural and urban students were those conducted by Lipset (1955) and Sewell and Orenstein (1965). These studies concluded that rural youth had lower aspirations than urban youth and as a result they could not compete effectively for urban jobs. More recently Lee (1984) pointed out that rural workers were well behind their urban counterparts in vocational development.

Educationally, rural students have been shown to be less academically able than their urban and suburban counterparts (Hanson, 1980). Regardless of the test used, researchers have consistently found that rural children score below the United States average (Carmichael, 1982, p. 7). Students of high academic ability have had a wider range of educational and occupational opportunities available to them because of the premium American society has placed on academic achievement and the upward social and economic mobility it offers. The status of parents has been shown to influence the academic achievement of children. In turn this academic achievement influences the aspirations and expectations of students (Marini and Greenberger, 1978).

Study of the impact of the unique characteristics of rural schools on the career aspirations of rural youth has not been widespread (Odell, 1986, p.43). Rural schools have been characterized by their small sizes, sometimes depressed economic situations, inability to maintain balanced staffs, and difficulty in offering broad and varied curricula. Sher (1983) and Wilson (1985) reported that students from small schools do as well or even slightly better academically than those from large schools, when socioeconomic status is controlled.

It is becoming increasingly apparent that rural communities will have to alter their economic patterns as the U.S. economy shifts. Current evidence suggests that rural communities cannot compete successfully with cities for the industries that are now emerging. Service and high-tech companies are concentrating primarily in the metropolitan areas. Small towns, with their heavy emphasis on agriculture, might actually have a higher incidence of risk takers than larger places. It's up to rural communities to build on that advantage, and rural schools must provide support (Rosenfeld, 1983, p. 273).

Aspirations have been influenced by characteristics of individuals. They have also been influenced by factors which are beyond the control of the individuals making the choices. "There is no universal recipe for living. Each of us carries his/her own life-form within him/her" (Jung in Vetter and Smith, 1971). An individual (Ogunrinde, 1981), within the limits set by his/her native endowments, responds to the social structure within which he/she lives to form various behavioral patterns that collectively constitute the personality. The actual process of occupational choice is a compromise between an individual's hierarchy of preferences and his/her hierarchy of expectations (p. 16).

[1]This article was reprinted with permission of the *Journal of Vocational and Technical Education* and was included in this OARDC Special Circular to provide a comprehensive report of this research project.

Methods and Data Sources

Multiple data sources were used. The race and high school grade point averages of students were obtained from high school records. Rural high school curricular offerings were obtained from school syllabi. Two instruments were developed. The student instrument contained three questions relating to personal and educational characteristics, eight questions relating to family background, four questions relating to parent educational and occupational attainment, five questions relating to educational expectations, five questions relating to occupational expectations, and one question relating to occupational aspirations. Content validity of the student information questionnaire and the administrator information questionnaire was established by a panel of experts consisting of university faculty, school administrators, and former high school teachers. The student instrument was pilot tested with a sample of students not included in the study, to determine suitability and reliability. Test-retest correlation coefficients were determined for each of the questions on the instrument. The eight-day test-retest reliability for the overall instrument was .84. Where available, information from the Ohio Department of Education was used to verify the validity of data supplied by the administrator questionnaire.

A cluster sampling technique was used. Four rural schools were randomly selected from the four geographic regions of Ohio. A questionnaire was administered to all of the 10th and 12th grade students in each of the schools. Information was collected from all students who returned signed parental permission forms. Data were analyzed using descriptive statistics and correlation techniques.

Results and Conclusions

Four hundred ninety-one rural 10th and 12th grade students were the data source. The sample was described as having a mean age of 16.7, as being just over 50 percent female, and over 99 percent white. More than 76 percent were enrolled in an academic or general high school program. Almost 14 percent were enrolled in vocational education. The mean grade point average was 2.64 on a 4-point scale.

The socioeconomic status of most of the families was low. Most of the fathers were employed in semi-skilled and skilled occupations. One-third of the fathers were mechanics, repairers, material handlers, equipment cleaners or laborers. Almost one-half of the mothers were not employed outside the home and were reported as homemakers. The mean number of siblings was 2.37.

More than 60 percent of the mothers and 52 percent of the fathers had terminated their formal education after high school. Sixteen percent of the fathers and 10 percent of the mothers had not completed high school. Twelve percent of the parents had completed four or more years of college.

The mean enrollment for grade 10 in the schools was 83.5 and for grade 12 the mean was 74.5. The mean number of teachers was 20. The mean number of course offerings per school was 76. Most (61.8 percent) of the students expected to attend college upon graduation from high school. Rural schools seemed to be emphasizing preparation for college attendance. Almost 40 percent of the students chose education, engineering, health science or business as the area they planned to pursue in college. Almost 50 percent of the parents expected their children to attend college, even though only 12.4 percent of the parents had achieved a college degree. The educational expectations that parents held for their children were therefore much higher than the educational attainments the parents had actually realized.

The Duncan Socioeconomic Index (Duncan, 1961) was used to classify the occupations of the parents and the occupations the youth were planning to enter. Parental occupations had a mean score of 35 on the index and occupations students planned to enter had a mean score of 54. More than 50 percent of the students expected occupations with scores above 60. Less than 15 percent of the students expected to work in construction, extractive, transportation, mechanics, production, materials handling, and laborer occupations. The status of the occupations that students expected to hold were much higher than the status of the occupations in which their parents were employed. The incomes expected by the rural students were not commensurate with the occupations they expected to hold. Students did not seem to be very well informed about the economic aspects of employment in a particular occupation.

Gender was found to be related to educational expectations, occupational expectations and occupation of choice (Table 1). Females were more likely to plan to pursue advanced education than were males. Students expected college study and employment in areas that were sex stereotypic. Program enrollment was also related to students' educational expectations, occupational expectations and occupation of choice (Table 1). Students in academic or college preparatory programs had higher educational and occupational aspirations than students enrolled in general, vocational or other high school programs. Student grade point average was related to educational and occupational expectations (Table 1) but was not related to the area for advanced study. It was also found that the expectations parents held for their

children had a profound influence upon plans for advanced education, type of advanced education, and area of advanced study. Parents exerted some influence over the occupation the student chose to pursue.

Implications and Recommendations

There appeared to be a great deal of encouragement in these rural schools and in the homes of these students to prepare for advanced education. This was especially true for students with above average ability. There appeared to be less concern with preparing for future endeavors with students of below average academic ability. Rural schools should promote educational opportunities beyond high school for students in vocational and other non-college preparatory programs. Guidance personnel should work with the two-year technical schools in their geographic areas to develop programs and relationships that will assist students in transition to post-secondary education.

Laughlin (1986) suggests that it is a popular misconception that all vocational education graduates go directly to work after high school. The evidence shows very clearly that this is not the case. A majority of them enroll in some type of postsecondary program and over 60 percent of those who enroll complete that program. A four-year college is the most popular schooling option for vocational education graduates.

The rural students in this study were consistent with national samples in aspiring to further education. Students were concentrating their occupational and educational aspirations in four career fields. Education, engineering, business and health were the most popular options for these rural students. Schools need to be sure that they provide information concerning all career fields to their students and that students have an opportunity to explore a broad range of career opportunities. The lack of knowledge students had about the salaries and wages associated with various occupations indicated that such information should be made available. Grade point average and program of enrollment were related to educational and occupational aspirations and expectations. This was not an unexpected finding. Schools should be cautious, however, in assuming that all students of higher ability wish to pursue certain career options and all students of lower ability wish to pursue other options. Society will need students of various ability levels in many different occupations at many different occupational levels. The fact that sex stereotyping continues in these rural communities suggests that previous efforts in this area have not been sufficient to accomplish the task. Parents need to be involved in career development and planning activities because of the influence they exert upon their children.

It appears that the majority of students are planning to enter education and occupations that will require their placement outside of the rural community in which they were raised. Few of the brightest students can expect to be living in the community and also realize their occupational aspirations. This outward mobility may make it more difficult for these communities in the future.

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Table 1. Relationships Between Educational Expectations, Occupational Expectations and Occupation of Choice and Gender, Program Enrollment, Grade Point Average and Parental Expectations for College

	Gender	Program Enrollment	G.P.A.	Parental Expectations for College
Educational Expectations				
Plans for Advanced Education	.21[cv]	.33[cv]	.43[pb]	.57[cv]
Type of Advanced Education	.21[cv]	.33[cv]	.36[pb]	.43[cv]
Area of Advanced Study	.61[cv]	.37[cv]	.07[pb]	.43[cv]
Occupation Expected	.25[pb]	.35[pb]	.36[p]	.29[pb]
Occupation of Choice	.19[pb]	.27[pb]	.30[p]	.21[pb]

cv=Cramer's V
pb=point biserial
p=Pearson Product Moment

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Teaching in a Rural Community[1]

J. David McCracken and Charles Miller
Department of Agricultural Education

Rural schools have been characterized as small, sometimes economically depressed, having difficulty in offering broad and varied curricula, and unable to maintain balanced staffs. One crucial aspect of rural education, rural teachers and their role in the school and community, has been conspicuous by its absence in research studies. There is little definitive data on rural teachers despite the fact that teachers are the key to educational excellence in any community or cultural context (Sher and Rosenfeld, 1987).

Rural schools function in environments which are quite different from urban and suburban settings. Community and cultural concerns often have greater impact upon rural schools and teachers because of the microcosmic setting in which they occur.

Questions were developed to address school and community concerns which exist in rural settings. These were: (a) How do teachers perceive their role in the rural community, (b) What factors help or hinder the teachers in fulfilling their roles, (c) How do the agricultural community and the school interrelate, and (d) What are the expectations of such communities for their teachers?

Objectives

Objectives for this study were to: (a) describe the expectations of rural school secondary teachers, (b) identify factors in rural communities that were related to the success of the education program, (c) identify factors in rural communities that limited the success of the educational program, (d) identify expectations of teachers in addition to classroom responsibilities, and (e) describe the support of the agricultural community for the school.

Related Literature

In a study of Utah teachers (Muse, Parsons and Hoppe, 1975), it was reported that more than half of the rural teachers surveyed felt they were more closely observed by community members than their urban counterparts. While few rural teachers mentioned poor salary as a disadvantage, most teachers and school administrators felt that teachers actually needed to work another job part-time to make a satisfactory living. Other difficulties in teaching in rural areas included a lack of equipment, facilities and materials, limited curriculums, "community cliques, gossip and small town talk," conservative attitudes, and a lack of conveniences. Principals of smaller schools reported significantly lower levels of satisfaction than did principals of large schools (Sparkes and McIntire, 1987).

Conversely, numerous advantages to teaching in rural areas have been reported. Muse, Parsons, and Hoppe (1975) found that rural communities were largely supportive of teachers in their schools. Most teachers were socially accepted in rural communities. Students and parents in these areas had a higher regard for the teaching profession than did the educators themselves. Other major advantages listed by teachers in rural communities were parental cooperation, a friendly population, good physical and family environments, and a good rapport between teachers and students. Barker (1987) indicated that rural schools support close working relationships between teachers and administrators as well. Teachers are given a sense of control over what and how they teach.

Dunne (1983) found that rural people are proud of their schools and typically refer to a family feeling, attention to individuals, and the commitment of the community resources and people. Schools in rural communities do develop a culture, a way of doing things (Carlson and Matthes, 1987). Persons who ignore these phenomena are designed to experience a significant struggle if they attempt to import changes which run counter to the established "way." On the other hand, people can impact the school if their ideas reinforce or support the established culture. Barker (1985) claimed that many problems such as finances, shortage of teachers, changing social values, and special interest groups were magnified in small high schools, yet, due to smaller size, they offered the best opportunities to create a school climate conducive to the best teaching and learning.

Procedures

Qualitative research methods were used in this descriptive study. Personal

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interviews were conducted with faculty members of four rural Ohio high schools in Ohio during 1985. A rural school was one that met the following definition: (a) located in a county outside a Standard Metropolitan Statistical Area, (b) located in a county with a total population of less than 40,000 people, (c) offered agriculture as a high school course, and (d) had a high school enrollment of 500 or fewer students (average class size under 125). Fifty-two Ohio public secondary schools met these requirements. These schools were geographically stratified into four groups to account for the social and economic differences associated with location. One school was randomly selected from each of the four groups. One teacher was randomly selected from those who were not teaching during each school period. This procedure resulted in six interviews being conducted in each school.

An interview schedule was developed. It was checked for content validity by a panel of former teachers. It was then field tested with practicing teachers for clarity and the nature of responses.

Each interview lasted most of the free period of the teacher. Probing questions were used to clarify responses or to obtain the reasons behind responses. Content analysis techniques were used to summarize the results.

Results

Faculty members taught a broad range of subjects. They had been teaching for several years and were residents of the communities where they taught. The average number of faculty members in each school was 20.

Advantages in Rural Community Teaching

Most teachers were comfortable with teaching in a rural setting. Advantages that were identified included fewer discipline problems, fewer of the problems found in urban schools, slower pace, lower cost of living, more assistance from the community, people knowing each other, students understanding and practicing the work ethic, more freedom in teaching, respect from the community, and little or no politics in the school system.

Problems in Rural Community Teaching

Problems that were identified were "narrow-mindedness" among community members, parents not having enough knowledge and experience to properly help students make sound decisions, and the failure of parents to encourage students to be goal-oriented.

Community and School Support for Teaching

Responses varied by community regarding support for education in general and for teachers in particular. Some teachers reported a great deal of community support for themselves and the school while others perceived their community as having a low priority for education and a poor image of teachers. The majority of teachers who were interviewed did report positive community attitudes and support.

Factors in the school or community that contributed to good teaching included: community support for the school and school activities; community commitment to education; parental involvement in the school; having the opportunity to know nearly all students, parents, and other community members; and, to various degrees, providing resources that were helpful for teaching.

The principal factor in the schools which contributed to better teaching was support by and cooperation between faculty members and administrators. Other desirable characteristics of the schools and students were: smaller class sizes, better disciplined students, student respect for teachers, desirable student attitudes and motivation, and close relationships between teachers and students.

School or Community Factors Inhibiting Teaching

The main complaint that teachers had about their rural communities was lack of privacy. It was stated that "everybody knows everybody's business." Other hindrances in the communities included conservative attitudes of community members, broken homes, lack of resources for field trips, lack of minorities resulting in students being "culturally deprived," and parents going directly to administrators with problems that the teacher should have had the opportunity to handle.

The schools lacked resources to properly fund equipment and teaching materials. Frequent class interruptions, difficulties in scheduling classes and busing students long distances to school were other concerns.

Role in Curriculum Development

The respondents were nearly equally divided concerning whether or not they contributed significantly to curriculum development. Those teacher who did influence curriculums reported that they were able to develop new courses of study or modify those being used by obtaining approval of administrators. These teachers reported having carte blanche in determining the content of courses.

Teachers reporting having little input into curriculum development taught in districts having prescribed curriculums. Teacher input into curriculum decisions in these districts was limited to participation in curriculum committee meetings, discussions with administrators about curriculums, and serving on textbook selection committees.

Extracurricular Activities

Two-thirds of the teachers were involved in extracurricular activities. The greatest number of teachers assisted with the school athletic programs. Several also served as class sponsors. Other activities listed were: directing plays, serving as club sponsors, directing school yearbook or newspaper staffs, directing the school band, and conducting college tours for upperclass students.

Moonlighting

Thirty-nine percent of the respondents indicated that they held jobs during the school year which provided them with a second income. Fifty-seven percent held jobs during the summer months.

Perception of Agriculture

The majority of the teachers considered agriculture to be "very important" in their community. Reasons cited were that agriculture provided employment and provided a solid background for many of the students and area residents. Some also felt that agriculture had some influence on the school curriculum. Only 10 percent of the teachers felt that agriculture was of minor importance in their community. Justification for this response included the fact that the agricultural economy was depressed and, therefore, agriculture made a smaller financial contribution to the tax base, and there was a relatively small number of full-time farmers in the community.

Implications

Most teachers preferred the rural school over other alternatives as a place to work. However, problems were of a much different type and magnitude than one might find in urban areas. At many universities, undergraduates wishing to be certified to teach are required to have experience in urban schools. These students should also be required to experience rural school situations if a uniform undergraduate program is to be maintained and students are to be suitably prepared for teaching.

Some teachers found it difficult to adapt to the traditional rural community structure. Teachers with rural backgrounds have more realistic expectations concerning what it is like to live and work in rural areas. Teachers should not be surprised that their teaching ability is continually being informally evaluated and reported throughout the community.

Schools operated informally. Classes were interrupted frequently. Interpersonal communications were normally used in place of written memos. Teachers need to be tolerant of class interruptions and of other activities which may require plans to be changed on the "spur of the moment."

In these small schools, teachers were expected to assist with extracurricular activities. These responsibilities were generally assigned to new teachers. Teacher preparation programs should provide students with the opportunity to develop abilities needed to supervise organizations and groups.

Financial support for the rural school is dependent upon an agricultural tax base. Erosion of that tax base has resulted in rural teachers beginning to question the continued support for education in rural communities. Support for schools should not primarily depend upon the real estate tax base within school district boundaries. Current and future teachers should understand that rural communities could not continue to exist without the contribution made by agriculture to the economies of rural districts.

The contributions made by rural schools and teachers were vital. Most teachers were satisfied with their work and the areas in which they lived. These teachers were actively involved in the school and the community. They were also cognizant of the vital roles played by the school and by agriculture in these rural communities.

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The Ohio Rural School as Viewed by Community Leaders[1]

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Challenges facing the delivery of rural education in the United States have grown in recent years. Rural student numbers have declined due to a general decline in the number of school-age children in the United States as well as a decline in rural populations. Economic resources have become more scarce because of the worsening farm economy and the general decline in revenues in many states.

Rural schools function in an environment which is quite different from urban and suburban settings. Community and cultural concerns often have greater impact upon rural schools and teachers because of the microcosmic setting in which they occur.

Objectives

This study describes the perceptions of rural community leaders about interrelationships between the community and the school. Specific objectives were to: (1) describe the role of the school in the life of the community, (2) identify community expectations for the school relating to recreational and cultural activities, (3) examine community influences on the curriculum of the school, and (4) identify the strengths and weaknesses of the school in the eyes of the community.

Perspective

Dunne (1983) reported that small rural communities see the local school as crucial to their continuing existence and the center of daily life so they keep a close watch on curriculum choices, frequently believing that they must intervene in the light of social values. Rural people often feel controlled by government or urban priorities so they offset that feeling by exercising a high degree of control over local institutions.

Rural schools typically have been subjected to the imposition of an urban reform model characterized by consolidation, centralization and standardization in a well-meaning but condescending attempt to improve the efficiency and quality of schooling. Thoughtful critics of such reform attempts have pointed out that the benefits achieved were bought at considerable price—a weakening of school-community ties, a subordination of agrarian values to business-industrial values, and the generation of social conflict (Pohland, 1987). Terreberry (1976) described school boards as feeling relatively powerless in the light of the interactive effects of political, economic and social systems. Barker (1985) claimed that many problems such as finances, shortage of teachers, changing social values, and special interest groups were magnified in small high schools, yet, due to smaller size, they offered the best opportunities to create a school climate conducive to the best teaching and learning.

Sederberg (1987) reported that educational operations of school districts have secondary economic effects that are important in rural communities. These economic effects include: (a) purchasing power of large payrolls, (b) employment opportunities, (c) stimulation of retail trade, (d) recapture of locally collected state and federal taxes, (e) maintenance of property values, and (f) support of banking services. Secondary econ-omic effects of school operations offset some educational costs.

Dunne (1983) has found that rural people are proud of their schools and typically refer to a family feeling, attention to individuals, and the commitment of the community resources and people. Surveys in rural areas indicate a 75 percent level of satisfaction with schools.

Methods

Qualitative research methods were used in this descriptive study. Personal interviews were conducted in 1985 with community leaders associated with four rural Ohio high schools. For the purpose of this study a rural Ohio public high school was one that was located outside a Standard Metropolitan Statistical Area, was in a county with a total population of less that 40,000 people, offered vocational agriculture as a high school course, and had a high school enrollment of 500 or fewer students (average high school class size under 125). Fifty-two public secondary schools in Ohio met these criteria. These schools were geographically stratified into four groups to account for the social and economic differences associated with location. One school was randomly selected

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from each of the four groups. School administrators then identified community leaders who were interviewed in each community.

Open-ended questions were used in the interviews to encourage free discussion by the respondents relating to the questions. Probing questions were used for clarification or to obtain the reasoning behind responses. Each interview lasted approximately 30 minutes. Content analysis techniques were used to summarize the results.

Results

Community leaders perceived the school as important to the community in ways that could be classified as educational, social, cultural, and economic. All respondents agreed that schools played an important role in rural communities. Terms commonly used to describe the schools were "central" or "nucleus." Many expressed the opinion that their communities would be damaged considerably if schools were closed or further consolidated. Quotes were "the school is the community" and "the community cannot exist without the school." The school was regarded as the major employer and "magnet" that attracted people in sufficient numbers to enable local businesses to survive.

Community leaders valued the good, "basic education" students were receiving and appreciated having an educated citizenry in the community. They appreciated the fact that students had been able to attend college and succeed academically. However, they expressed that the real value of rural schools went far beyond the knowledge imparted to students. Teachers were highly regarded for their ability to work with and encourage students, their exceptional efforts in doing more than was expected of them, and their high moral standards. A low teacher turnover rate and good teacher-parent relationships were also mentioned as positive aspects of rural faculties. The schools were complimented for their accessibility, cleanliness, pride, respect, discipline, moral standards, student support, and community loyalty. Community cohesiveness, community support for the school and the school for the community, community spirit expressed by accessibility, and loyalty of residents for both school and community were appreciated. Several respondents mentioned specific teachers who were very active in community affairs. The school obviously played a key role in most of the community activities.

Schools also played an important role in the recreational and cultural activities available to the rural youth. A variety of activities listed by respondents included: summer sports programs, 4-H, FFA, variety shows, school dances, music programs, plays, and athletic events. Athletic events appeared to be important community social activities. Quotes were "there's always something going on at the school" and "we have to go outside the community for other than school and church activities." Community leaders expressed that the small school atmosphere provided students with greater opportunities for participation in activities than might be available in larger districts.

Not only did the schools serve as activity centers for youth, but facilities were accessible for adult activities. The school was the only community facility where large groups could gather. Adult farmer meetings, senior citizen groups, and square dance clubs were examples of ways in which the school building was used.

Discussion

The rural school was viewed as important, both economically and educationally, within the structure of the rural community. It often serves as the most common bond or concern for rural communities and is, therefore, regarded as the nucleus of many rural towns and districts.

The school plays an important social role in rural society. In many rural areas, schools offer recreation and socialization alternatives, and are often expected to provide for community cultural and recreational needs.

Decision-makers who consider school consolidation should realize that the impact of closing a school may be greater than they might envision; they may also be closing the community served by the school. Teachers and administrators who expect to work in a rural community environment should be aware of rural school roles and expectations if they wish to be received by local residents.

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Vocational Agriculture in Rural Ohio Schools

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Vocational agriculture has been the program for public school education in agriculture. Agricultural instruction must fit within the context of the entire school curriculum. Recent trends have resulted in scheduling problems for the traditional vocational agriculture curriculum. These problems appear to be more acute in small rural schools. It is increasingly difficult for rural youth to enroll in a course which provides the opportunity for them to develop a career interest in agriculture. This difficulty is expected to impact increasingly upon enrollment in higher education in agriculture. Agricultural students, scholars, leaders and workers will need to be recruited and educated. There will not be enough people to fill this need who will have been raised on farms.

Agriculture is changing. In the year 2000 (Lennon, 1983), 1 percent of the farms may produce 60 percent of the agricultural production. The business and industry of agriculture (McCracken and Newcomb, 1981) both on and off the farm, will increasingly become more technological, more specialized, more business-oriented, and more efficient. More part-time farmers will be "living on a little land." The consuming public will have little direct knowledge of agriculture.

How can rural communities provide the type of education needed by youth? What curriculum patterns assist students in developing a career interest in agriculture, and still provide the academic rigor demanded by society? What influences students as they make educational decisions and occupational choices? What constraints inhibit rural schools in attempting to meet the educational needs of rural youth?

Objectives

This study describes the perceptions of agriculture teachers and students about the status of vocational agriculture in rural communities. Objectives were to: (a) describe the overall school curriculum of students enrolled in vocational agriculture, (b) describe reasons students enroll in vocational agriculture, (c) identify scheduling problems, (d) describe the image of vocational agriculture held by students and others, (e) identify what students expected to do after high school graduation, and (f) describe the support for vocational agriculture.

Method

Personal interviews were conducted during 1985 with 12 randomly selected 10th and 12th grade students and the vocational agriculture teacher in each of four randomly selected Ohio rural schools. In addition, interviews were conducted with a random sample of six other teachers from each of the four schools. These additional interviews were used to develop a profile of vocational agriculture students and their perceived personal traits. These schools represented four different geographical regions. Open-ended questions were used in the interviews to encourage free discussion by the respondents relating to the questions. Each interview of students lasted about 20 minutes. Teacher interviews lasted about 40 minutes. Content analysis techniques were used to summarize the results.

Results

Approximately 20 percent of the students were enrolled in a college preparatory curriculum. The others were in either a general or vocational curriculum. The major reason, given by 40 percent of the students, for enrolling in their present schedule of classes was to meet graduation requirements. About 17 percent stated that preparation for college was their objective. Other reasons noted by several students included interest in the courses they were taking and ease of course work. Reasons mentioned infrequently were that the courses would help them in the future, that they were placed in the courses by the counselor, and the counselor suggested the students's schedule. Guidance counselors were identified as assisting 50 percent of the students in selecting their courses. Parents assisted 40 percent of the students in the selection of their courses. Friends and teachers helped some students in course selection.

About 40 percent of the respondents indicated that they enrolled in vocational agriculture because they currently lived on a farm or had lived on a farm. Interest in agriculture, interest in farming, and opportunities to do shop work were each given as reasons by 10 to 15 percent of the respondents. Other reasons included learning about farm jobs, expecting to become a farmer, to gain experience,

to learn about animals, to meet people, to work outdoors, and to escape courses that are mainly lecture. Over half of the students said that vocational agriculture was their favorite class. There was, however, a great deal of variance from school to school in the responses to this question. About 17 percent of the students enrolled in vocational agriculture had some difficulty in scheduling the class. It was also possible that students who desired to enroll were not able to do so and thus were not in the frame from which the sample was drawn. Variance among schools was noted in the difficulty of scheduling vocational agriculture classes. The greatest scheduling conflicts were with the college preparatory curriculum. Innovative ways, such as independent studies, were being used to enable college preparatory students to continue in vocational agriculture.

A general profile of vocational agriculture students was developed. Students were described as being from farms and having an interest in agriculture. This included a desire to learn about animals, crops, and mechanics. They wanted the opportunity to do shop and laboratory work, to participate in FFA activities and meet people, and to learn about various agricultural industries and work. Few were considered to be "academic" students and it was felt that, for some, taking agriculture was their principal purpose for coming to school.

Personal traits most often attributed to vocational agriculture students included willingness to work, friendliness, helpfulness, concern for others, and self-sufficiency. Agriculture students were characterized as tending to socialize more together but were not very different from any of the other students. It was noted that agriculture students are as varied as the general student population.

Vocational agriculture students expressed a variety of expectations for pursuits after graduation. The largest percentage of respondents (20 percent) planned to attend a college or university to pursue a degree in a field other than agriculture. Nearly 12 percent of the students planned to attend college and major in some field of agriculture. About 19 percent planned to enter farming full-time and another 7 percent wanted to farm part-time. Approximately 7 percent were classified in each of the following categories: enter the military, attend a technical school, or work in an agricultural business. Nearly all the remaining students planned to seek jobs as craftsmen, in trades or as general laborers. Most had no specific job objective in mind however.

Degree of support for the vocational agriculture program in the community varied among the schools but was perceived as ranging from good to excellent. Community-wide support for the agriculture program was generally perceived as being present, with some communities displaying excellent support through contributions such as award sponsorships and providing for activities like field trips. The most frequently mentioned support groups were the young farmer organization, FFA alumni group, agricultural businesses, civic clubs, and other teachers in the school.

Discussion

Students enrolled in vocational agriculture for many different reasons and expected to use their vocational agriculture background in many different ways. Most students rated vocational agriculture as one of their favorite subjects, but had differing reasons for giving it a high rating. Scheduling of agricultural course work was only a problem for the college preparatory students. A challenge to program developers is the design of a program which will enable college preparatory work and enrollment in a high school program which would further develop students' interests in agriculture.

Vocational agriculture students were perceived to be less academic than the general student body but were characterized as having traits allowing them to compensate for this (i.e. hard working, self-sufficiency). A greater percentage of these students planned to enter college rather than full-time or part-time farming. Nearly 50 percent of the students planned to be involved in some aspect of agriculture following graduation.

Community support for the agriculture program in the school was good. The strongest support came from organized young farmer and FFA alumni groups. These groups have members who have experienced the vocational agriculture program and desire an excellent program of this nature to continue for current and future students.

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Gender Differences in the Aspirations of Rural Ohio Youth[1]

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Research concerning the educational and occupational aspirations and expectations of males has been much more comprehensive than for females (Blau and Duncan, 1967; Haller and Portes, 1973; Lipset, 1984; Otto and Haller, 1979). More recently, researchers (Card et al, 1980; Dunne et al, 1981; Falk and Slater, 1978; Farmer, 1985) have pointed out the importance of investigating the differences between the aspirations and expectations of males and females.

Dunne, Elliott and Carlsen (1981) stressed the need for an increased research base upon which theorists could map the female status attainment process. Gottfredson (1981), in developing a theoretical model to guide the understanding and study of occupational aspirations, states: "The importance of social class, intelligence, and sex are often taken for granted; it would be helpful to systematically explain their importance" (p. 545).

Studies of the relationship between gender and aspirations and expectations have produced mixed results. Harrison (1969), in a study of 160 selectively sampled tenth-grade students, concluded that gender had no significant effect on aspirations or expectations. Likewise, Davis (1972), in a study of rural and urban students in central South Carolina, and Powers (1974), in a study of ninth grade students in Kentucky, found no significant differences between the aspirations or expectations of males and females.

Conversely, Marini and Greenberger (1978), in a study of 2,495 eleventh grade students in Pennsylvania, found that males both aspired to and expected higher levels of educational attainment than did females. The females in a study conducted by Ohlendorf and Rafferty (1982) were found to have higher occupational aspirations than the males. Lee (1984) indicated the presence of a sex effect in the prediction of occupational aspirations and expectations, with females having higher aspirations and expectations than males.

Some studies have suggested that occupational aspirations and expectations are influenced by sex stereotyping. Falk and Salter (1978) found that a majority of the young women in the Southern Youth Study desired occupations that were sex stereotypic for females, e.g., beauticians, nurses, stenographers, and teachers. This finding was in agreement with an earlier report by DiSabatino (1976), suggesting that sex-role stereotypes inhibit the freedom of women in making occupational choices. Dunne, Elliott and Carlsen (1981) reported that the effect of sex stereotyped occupations on the occupational aspirations and expectations of females was lessening and that overcoming sex stereotyped occupational selection may be more difficult for males than for females. Gottfredson's (1981) review of research and subsequent theoretical model pointed out that sex typing of occupational aspirations and expectations is clearly the norm and that continuation of sex typing is supported or encouraged by young males and females. These studies point out the need for continued research regarding sex differences in aspirations and expectations which will lead to a greater understanding of this phenomenon. This article reports research which examined the educational and occupational expectations of 491 rural Ohio tenth- and twelfth-grade students. The purpose was to answer the following questions:

1. Is there a significant difference between the educational and occupational expectations of Ohio tenth- and twelfth-grade students?
2. Are the educational and occupational expectations sex stereotypic as Gottfredson's (1981) theoretical model would lead us to believe?

Method

The descriptive survey method of research was utilized. Data were collected with the use of a questionnaire. Data reported here were gathered for a baseline study of rural high school education in Ohio. It was part of a planned longitudinal study aimed at identifying problems and changes in rural education. These data were collected during 1985.

Population

For the purpose of this study, a rural Ohio public high school was

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one that met the following criteria: (1) located in a county outside a Standard Metropolitan Statistical Area, (2) located in a county with a total population under 40,000 people, (3) offered vocational agriculture as a high school course, and (4) had a high school enrollment of 500 or fewer students (average high school class size of under 125 students). Using the state's educational directory, 52 high schools that met the outlined criteria were identified. These 52 high schools served as the population for this study and were geographically stratified into four groups to account for the social and economic differences associated with location. One school was randomly selected from each of the four strata for participation in the study. The four selected schools constituted the sample for this study.

Subjects

Data relative to educational and occupational expectations were purposively collected from tenth- and twelfth-grade students in each of the four schools in the sample. Questionnaires were administered to 498 students. Of the 498 questionnaires, seven were discarded because they were uncodeable or incomplete. The remaining 491 questionnaires were analyzed by gender to determine if sex differences occurred.

Instrumentation

Data relative to the educational and occupational expectations of the rural tenth- and twelfth-grade students in this study were collected using a researcher developed Student Information Questionnaire (SIQ). This instrument was developed following the questionnaire construction principles outlined by Dillman and was modeled after instruments used in previous studies as identified in a review of related literature. The SIQ was a 30-question instrument which required about 20 minutes to complete. The questions dealt with career and educational expectations, parental influence, and demographic characteristics. Content validity of the SIQ was established using a panel of experts consisting of teacher educators, rural school administrators and teachers. A pilot study using an eight-day test-retest procedure resulted in an instrument reliability of .84.

This article is based on an analysis of responses to five of the 30 questions on the SIQ. One question was related to the occupational expectations of the rural students studied. This open ended question asked the students what occupation they expected to enter after they had completed their education (occupational expectation). For analysis, the question was coded in two ways. Occupations were coded using the Duncan Socioeconomic Index (Duncan, 1961) to make the data compatible with that reported in other studies of rural students (Cosby and McDermott, 1978; Dunne et al, 1981; Thomas and Falk, 1978). This index assigns values of 0 (low status) through 96 (high status) to occupations arriving at a relative estimate of the socioeconomic status of an occupation. The limitations and problems associated with the use of the Duncan Socioeconomic Index as the sole measure of occupational status have been identified by Dunne, Elliott, and Carlsen (1981). To further substantiate the expected occupations of rural students in this study, occupations were assigned into 21 occupational categories using the *Standard Occupational Classification Manual* (U.S. Dept. of Commerce, 1977). The four multiple choice questions relating to educational expectation were developed to solicit information about college attendance, type of college in which the rural students were interested, when they planned to attend college, and the area (major) they planned to study while in college.

Data Collection

Tenth- and twelfth-grade students in the four rural schools studied who were present on the day the data were collected and who had returned parental permission forms were administered the SIQ. Of the 632 tenth- and twelfth-grade students enrolled in the four rural schools, 498 (78.8 percent) completed questionnaires. Student numbers were placed on all questionnaires before administration. These student numbers were then matched with student high school records to obtain the race and high school grade point averages of the participating students. This information was recorded on the front cover of the questionnaire.

Results

A significant difference existed between the educational expectations of the young rural women in this study (Table 1) and the expectations of the young men. Of the 248 females, 71 percent planned to attend college upon graduation from high school compared to 52.3 percent of the study's 243 young men. This finding supports that of an earlier study conducted by Dunne, Elliott and Carlsen (1981). The findings were in direct opposition to those of Thomas and Falk (1978), who reported that males had higher educational aspirations than did females.

There was not a significant difference between the type of advanced education planned by males and females who were undecided or planning to attend college (Table 2). A majority (50.5 percent) of the females expecting advanced education planned to attend a four-year college or university, compared to 40 percent of the males.

Data in Table 3 show that almost 62 percent of the females expected to begin advanced education immediately following high school, while less than 44 percent of the males had the same expectation.

Areas in which the rural high school students planned to study in college were significantly different by gender. Students tended to select sex stereotypic areas of college study. Males expecting to study in agriculture, science, engineering, and electrical technologies, outnumbered females. Females outnumbered males in art, social science, education, and health sciences, with mathematics and business being the only non-traditional areas of study where females outnumbered males (Table 4). This finding was consistent with Gottfredson's theoretical model for occupational expectancy.

The results of the analysis of occupational expectations were very similar to the educational expectations. The sex stereotypic selection patterns associated with areas of college study were also present in occupational expectations. There was a significant difference between the occupational expectations of males and females (Table 5). Females more often expected to be in teaching, health, nursing, clerical, and service fields while males more often expected to be in engineering, natural science, agriculture, construction, mechanics, and military occupations.

A t-test revealed that when occupational expectations were assigned values using duncan's Socioeconomic Index, females in the study had significantly higher occupational expectations than did their male counterparts (Table 6).

The findings of this study support the contention that educational and occupational expectations of rural males and females are different. The findings also support Gottfredson's (1981) theory of occupational expectancy and the contention that sex stereotypic thinking is manifested in the educational and occupational expectations of rural youth.

Table 1. Educational Expectations by Gender

	Attend College							
	Plan to Attend		Undecided		Don't Plan to Attend		Total	
Gender	n	%	n	%	n	%	n	%
Males	127	52.3	53	21.8	63	25.9	243	100.0
Females	176	71.0	42	16.9	30	12.1	248	100.0
Total both sexes	303	61.7	95	19.4	93	18.9	491	100.0

X^2 (2, N−491)=20.86, $p<.05$

Table 2. Type of Advanced Education Expected by Gender

	Type of Education							
	Four Year College or University		Junior or Technical College		Undecided		Total	
Gender	n	%	n	%	n	%	n	%
Males	72	40.0	55	30.6	53	29.4	180	100.0
Females	110	50.5	66	30.3	42	19.2	218	100.0
Total both sexes	182	45.7	121	30.4	95	23.9	398	100.0

X^2 (2, N−398)=5.43, $p<.05$

Table 3. When Advanced Education is Expected to Begin, by Gender

	When Advanced Education Will Begin							
	Upon High School Graduation		After Working or Military Service		Undecided		Total	
Gender	n	%	n	%	n	%	n	%
Males	78	43.3	44	24.4	58	32.3	180	100.0
Females	135	61.9	26	11.9	57	26.2	218	100.0
Total both sexes	213	53.5	70	17.6	115	28.9	398	100.0

X^2 (2, N−398)=15.81, $p<.05$

Conclusions

The educational and occupational expectations of rural youth are changing. Educational expectations of females are higher than those of males,

with a similar pattern occurring in occupational expectations. This report tends to support the contention that young rural women are aspiring to a broader range of occupations than earlier studies had indicated.

Changes in our economy and society as a whole may, in part, be responsible for the increased educational and occupational expectations of females. The increased number of single parent families and families where both spouses must work may be a catalyst for changes in female expectations.

Some of the differences in occupational expectations may be due, in part, to the scale used to measure it. The Duncan SEI tends to favor female occupations, giving them higher scores than male occupations requiring equivalent skills. However, the further clarification of occupational expectations reported in this paper using the *Standard Occupational Classification Manual* (U.S. Dept. of Commerce, 1977) again indicated that females were making occupational choices that were sex stereotypic.

The data indicate that rural high school students are being made aware of the need for education beyond high school and of the upward social and economic mobility it brings. They did not seem to exhibit this awareness in respect to occupational expectations. The relationship between educational and occupational attainment seems to have been overlooked in the education and guidance of these students.

This investigation indicates that there are differences between the expectations of rural males and females. These differences do not explain the attainment process for rural youth, but do indicate a need for additional research and attention by those involved in teaching and guiding young people so that theoretical models of educational and occupational expectancy can be substantiated.

Table 4. Expected Areas of College Study by Gender

	Gender					
	Male		Female		Total Both Sexes	
Area of Study	n	%	n	%	n	%
Agriculture	17	9.4	2	0.9	19	4.8
Art/Humanities	10	5.6	18	8.3	28	7.0
Sciences	14	7.8	6	2.8	20	5.0
Mathematics	6	3.3	10	4.6	16	4.0
Social Science/Education	14	7.8	54	24.8	68	17.2
Engineering	43	23.9	8	3.7	51	12.8
Health Sciences	8	4.4	31	14.2	39	9.8
Business	11	6.1	36	16.5	47	11.8
Law	3	1.7	5	2.3	8	2.0
Office Management	0	0.0	13	5.9	13	3.3
Electrical Technology	13	7.2	5	2.3	18	4.5
Other Areas[1]	3	1.7	13	5.9	16	4.0
Other Areas[2]	22	12.2	6	2.8	28	7.0
Undecided	16	8.9	11	5.0	27	6.8
Total	180	100.0	218	100.0	398	100.0

$X^2(13, N=398)=123.61,\ p<.05$

[1]Communications, Fashion Merchandising, Air Travel, Cosmetology and Food Service areas.
[2]Computer Science, Aviation, Accounting, Construction Technology areas.

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Table 5. Occupational Expectation by Gender

Occupations	Gender					
	Male		Female		Total Both Sexes	
	n	%	n	%	n	%
Executive, Administrative and Managerial	24	9.9	32	12.9	56	11.4
Engineers and Architects	18	7.4	4	1.6	22	4.5
Natural Scientists and Mathematicians	14	5.8	4	1.6	18	3.7
Social Scientists, Social Workers, Religious Workers and Lawyers	3	1.2	16	6.5	19	3.9
Teachers, Librarians, and Counselors	5	2.1	36	14.5	41	8.4
Health Diagnosing and Treating Practitioners	5	2.1	10	4.0	15	3.1
Registered Nurses, Pharmacists, Therapists, and Physician Assistants	6	2.5	18	7.3	24	4.9
Writers, Artists, Entertainers, and Athletes	12	4.9	11	4.4	23	4.6
Health Technologists and Technicians	0	0.0	7	2.8	7	1.4
Other Technologists and Technicians	12	4.9	6	2.4	18	3.7
Marketing and Sales	2	0.8	8	3.2	10	2.0
Clerical	3	1.2	41	16.6	44	9.0
Service	19	7.8	26	10.5	45	9.2
Agricultural and Forestry, Fishers and Hunters	19	7.8	2	0.8	21	4.3
Construction and Extractive	25	10.3	0	0.0	25	5.1
Transportation and Materials Moving	7	2.9	3	1.2	10	2.0
Mechanics and Repairers	22	9.1	1	0.4	23	4.6
Production Worker	6	2.5	1	0.4	7	1.4
Material Handlers, Equipment Cleaners, and Laborers	4	1.6	1	0.4	5	1.0
Military Occupations	21	8.6	1	0.4	22	4.5
Homemakers[1]	0	0.0	3	1.2	3	0.6
Undecided[1]	16	6.6	17	6.9	33	6.7
Total	243	100.0	248	100.0	491	100.0

X^2 (21,N=491)=188.25, $p<.05$

[1]Not a category in the Standard Occupational Classification Manual.

Table 6. Duncan's Socioeconomic Index Scores for Occupational Expectations, by Gender

Gender	Duncan SEI Score	
	Mean	Standard Deviation
Males	47.6	27.26
Females	60.7	20.49

t (453)=5.80, $p<.05$

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Implications for Colleges of Agriculture Based Upon A Study of the Educational Plans of Rural Ohio Secondary Students[1]

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Enrollments in colleges of agriculture have traditionally drawn heavily from rural communities. Changes in the agricultural economy and other factors have resulted in fewer undergraduate students studying agriculture. What are the college attendance plans of rural students in Ohio? What influences do the parents of these students exert in the decisions students are making about their future careers? To what extent do rural students continue to choose careers in areas that are sex stereotypic?

In order to seek the answers to these and other related questions, a study was conducted in Ohio with the major purpose of discovering the aspirations of rural students relating to higher education. Specific objectives were to: (1) investigate the extent to which parental influence is a factor in educational and career choices of students, (2) describe the extent students expected to further their education beyond the high school, (3) examine the relationship between gender and educational and career choices, and (4) develop implications for colleges of agriculture.

Methods

The study was descriptive and correlational in nature. The populations consisted of 10th- and 12th-grade students in 52 Ohio public secondary schools that met the criteria for a rural school district. Four geographical strata were established for sampling purposes. One rural school was selected randomly from each of the four strata. Data were collected by questionnaire from the students in their school classes. The content validity of the questionnaire was established by a panel of experts, and the reliability was established using a test-retest procedure. Usable data were gathered from 491 students during the Spring and Autumn of 1985.

Results

Positive but low relationships were found between parental expectations and the expectations of students ($r=.24$). Most students had discussed their future educational plans with their parents (Table 1). Fewer than 25 percent of the students in the study reported very little or no discussion of educational plans with their parents. Approximately one-half of the students believed that their parents expected them to attend college (Table 2). Parents of 27.7 percent of the students were perceived as not expecting their children to attend college. Some students (22 percent) were unsure of their parents expectations concerning college attendance.

Parents and rural schools seemed to place a great deal of importance on the upward social and economic mobility offered by advanced education. The mean socioeconomic index score of 29.7 for occupations held by the fathers and the mean SEI score of 54.2 for the occupations expected by the students may have been a reflection of this attitude. More than two-thirds of the parents had no education beyond high school but over 60 percent of the students reported they would attend college.

More than 46 percent of the rural students reported that their mothers were homemakers. Less than one percent of these students expected to become homemakers as their sole occupation.

Expectations for Advanced Study

When asked what type of college they would be likely to attend, 37.7 percent responded they would attend a four-year college or university. Twenty-three percent reported plans for attending a technical school and almost five percent reported plans to attend a junior college. Twenty-one percent were undecided about which type of college they would attend and 13 percent reported that they did not plan to attend college (Table 3).

Table 4 shows that almost 44 percent of the students believed that their advanced education would begin immediately upon graduation from high school. However, other students planned to delay their entry into higher education. The military service or a few years of work before entering college was the choice of about 16 percent of the students. Over one-fourth of the students had made no definite plans about when they might attend college.

[1]This article was reprinted with permission of *NACTA Journal* and was included in this OARDC Special Circular to provide a comprehensive report of this research project.

Agriculture was not the first choice as an area of advanced study for these students (Table 5). Engineering was the area chosen by 11.8 percent. The combined areas of education, engineering, health sciences, and business accounted for almost 40 percent of the areas students were planning to study. Only 4.3 percent of the students from these rural schools listed agriculture as their choice for future study.

Gender and Career Choice

There was a substantial relationship (r=.61) between gender and the area of study that students expected to pursue while in college. Males tended to expect to study agriculture, science, and engineering more frequently than females. Females more frequently expected to study the areas of art, mathematics, social science, education, health science, business, and secretarial science than males. The occupation in which students expected to eventually work was much less gender-specific (r=.19) than the planned area of study in college.

Females in the study reported definite plans for attending college upon graduation from high school more frequently than males. The correlation between gender and plans for advanced education was .21. Females expected occupations with higher SEI scores than males, which supported the findings of Dunne, Elliot, and Carlsen (1981) and Ohlendorf and Rafferty (1982). Males expected higher first-year incomes than females, and males were more likely to enter military service than were females.

Implications

Parents generally want their children to have more opportunities

Table 1. The Extent Students Had Discussed Educational Plans With Their Parents

Extent	n	Percent
A Great Deal	151	30.8
Some	222	45.2
Very Little	78	15.9
None	36	7.3
No Response	4	0.8
Total	491	100.0

Table 2. Student's Perceptions of Parental Expectations for College Attendance

Expected to Complete or Attend	n	Percent
Yes	245	49.9
No	136	27.7
Not Sure	108	22.0
No Response	2	0.4
Total	491	100.0

Table 3. Type of Advanced Education Planned by Students

Type of Institution	n	Percent
Four-Year College/Univ.	185	37.7
Technical College	114	23.2
Junior College	24	4.9
Don't Know	104	21.2
Don't Plan to Attend	64	13.0
Total	491	100.0

Table 4. When Advanced Education Would Begin for the Students

When	n	Percent
After H.S.	215	43.8
After Military	32	6.5
After Working	45	9.2
No Definite Plans	131	26.7
Don't Plan to Attend	62	12.6
No Response	6	1.2
Total	491	100.0

than they were afforded. Parents in rural areas see formal education beyond high school as a way for their children to break away from the limited occupational and social opportunities available in most rural communities. Rural schools reflect the attitudes of the parents by placing great emphasis on preparing students for college. Most of the job opportunities in the rural areas are for semi-skilled, skilled and technical workers. Rural students attending college will typically enter occupations that are not present in large numbers in rural communities. This results in young adults leaving the rural community to live in the cities and suburbs where greater job opportunities exist. This outward migration of the best young talent from the rural communities will deprive these areas of the leadership needed to develop their economic and agricultural potential in the future.

Rural students were choosing occupations for which there were few, if any, role models in the communities where they lived. Students therefore had only limited information and sometimes distorted views about their chosen occupation. This lack of understanding could result in students pursuing occupations for which they are not suited, or pursuing an education required to enter an occupation, only to find that the occupation is not what they truly envisioned it would be.

The expectations parents held for their children for education beyond high school had a profound influence upon their children's plans for advanced education, area of advanced study, and when advanced education would begin. If parents promoted occupations available in rural areas, students might be more willing to seek education and employment that would help develop rural communities.

The image of colleges of agriculture appear to be closely tied to the agricultural economy. When the agricultural economy has been having difficulty, enrollment in colleges of agriculture has dropped. This survey was conducted during a period of time when farmers were questioning the future of agriculture. Few rural students were selecting agriculture as an area of study to pursue in college. However, these students provide the best source of future leaders with the background to improve the future of agriculture.

The results of this study suggest that colleges of agriculture will need to work with both parents and students in recruitment efforts directed toward attracting the most outstanding talent to study and work in agriculture. Special attention should be directed towards female students, who still tend to choose sex stereotypic occupations. Role models and information about opportunities may be helpful in overcoming traditional perceptions about what occupations might be appropriate for each sex to enter.

Many of the students expressed a desire to continue to live in a rural area. Many of the careers in agriculture provide an opportunity to live and work in rural communities. Colleges of agriculture should make sure that rural students and their parents understand that educational and career decisions may have a direct influence upon where the students will live after graduation from college. Recruitment efforts should be designed to communicate a positive image of agriculture, should reach both parents and students, should attract students of both genders, and should not only emphasize the occupations for which students are being prepared but also the quality of life in the communities in which they are likely to work.

Table 5. Area of Advanced Study Planned by Students

Area of Advanced Study	n	Percent
Agriculture	21	4.3
Art	21	4.3
Sciences	22	4.5
Humanities	8	1.6
Math	17	3.5
Social Science	24	4.9
Education	45	9.2
Engineering	58	11.8
Health Science	40	8.1
Business	48	9.8
Law	8	1.6
Secretarial Science	13	2.6
Electrical Tech.	16	3.3
Computer Science	9	1.8
Auto Mechanics	9	1.8
Accounting	9	1.8
Cosmetology	7	1.4
Other	16	3.3
Undecided	16	3.3
Don't Plan to Attend College	68	13.8
No Response	16	3.3
Total	491	100.0

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Comparison Between the 1985 and the 1988 Career Plans of the Same Rural Youth in Ohio

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Aspirations are important because they guide what students learn in school, how they prepare for adult life, and what they eventually accomplish. Educators can better plan their policies and practices if they understand current youth aspirations (Walberg, 1989, p.1).

Aspirations have two distinctive aspects. First, they are future oriented. They can only be satisfied at some future time. This distinguishes them from immediate gratifications. Secondly, aspirations are motivators. They are goals individuals are willing to invest time, effort or money in to attain. This distinguishes them from idle daydreams and wishes (Sherwood, 1989, pp. 61-62).

One line of inquiry for the study of aspirations has sought to account for individual differences in the goals or objects of aspirations. This line of inquiry has been based upon Lewin's field theory which treats aspirations as the choosing of goals within a field (Lewin, 1951). This field (psychological environment) is comprised of an individual's personal values and his or her judgments concerning the comparative likelihood of achieving various, valued ends. An individual tends to choose opportunities that are most likely to lead to desired outcomes and away from unwanted ones (Sherwood, 1989, p. 61).

Bandura's social learning theory implies that learning and related behavior are viewed as resulting from three sets of interacting influences: (a) background or given influences such as gender, ethnicity, and ability; (b) psychological or personal self-concept factors such as attitudes, beliefs, and previous experiences; and (c) environmental or social factors in society that affect the individual (Bandura, 1978).

Aspirations of Rural Students

Aspirations have been shown to be among the most significant determinants of eventual attainment (Gottfredson, 1981). Among the first studies comparing the aspirations and expectations of rural and urban students were those conducted by Lipset (1955) and Sewell and Orenstein (1965). These studies concluded that rural youth had lower aspirations than urban youth and as a result they could not compete effectively for urban jobs. More recently Lee (1984) pointed out that rural workers were well behind their urban counterparts in vocational development. There is a growing body of literature that suggests that rural youth have lower levels of academic and vocational aspirations than their counterparts in suburban and urban areas (Cobb, McIntire, and Pratt, 1989, p. 11).

Background Factors and Aspirations

Guidance personnel need to be aware of the potential influence of race, sex, and socioeconomic status on the career development of students (McNair and Brown, 1983). Gender, for example, has been found to be substantially associated with the area of advanced study students expected to pursue while in college (Odell, 1988). Odell recommended that guidance counselors in rural schools provide leadership to teachers and administrators in reducing sex stereotyping, and that information about men and women in nontraditional roles be included in all high school courses.

Yang (1981) reported that the decision of youth to enter college was strongly influenced by the expectations of parents. Lee (1984) advised that "parents, regardless of their racial background, need to be fully aware of their influence on the aspirations and expectations of young men and women" (p. 33). Kotrlik and Harrison (1989) concluded that students perceive that their parents influence their career choice more than any other person, and the mother is more influential than the father. Evans and Herr (1978, p. 122) identified the factor of low aspirations of parents for their children as modifiable to a certain extent by schools.

High school curriculum has shown moderate association with expectations for advanced education and the occupational areas to be pursued (Odell, 1988). McCracken, Barcinas, and Wims (1990) reported differences among students in academic, general, and vocational curricula in the background characteristics of ethnicity, socioeconomic status (SES), grade point average, educational level of mother, and parental expectations for advanced education; in the occupational aspirations of SES of desired and expected job, and income expectations; and in educational aspirations relating to plans

for advanced education. Jyung (1989) found strong correlations between curriculum of enrollment and both education and vocational aspirations for tenth and twelfth graders.

The Problem

The career education literature advocated early tentative career choice, believing it added to student motivation. The choice was to be kept tentative, with options kept open. Experimentation and change was to be encouraged. The constant reassessment of career choices was to be built into the system (Hoyt, Evans, Mackin, and Mangum, 1972, p. 15). By following the same students over a period of time, the extent to which changes in aspirations occur can be observed. What changes occur in educational and occupational aspirations? What people influence the career and educational choices students make? What differences in aspirations might be due to differences in background factors? Do students who enrolled in different high school curricula have differing aspirations? Questions such as these provided the basis for a panel study of rural Ohio students.

Purpose and Objectives

An underlying purpose for this research was to respond to a need to understand the impact of changing rural communities on the aspirations of youth. This panel study was conducted to ascertain changes in the aspirations of rural youth in Ohio as they matured during their high school years and entered college or the work force. Specific objectives were to answer the following research questions: (a) what are the sources of influence on rural youth as they make curriculum decisions in a three-year period of time, (b) what changes occur in a three-year period of time in desired and expected careers of rural youth, (c) how is gender related to expected salary, plans for further education, and level of aspirations, and (d) how is the high school curriculum related to aspirations?

Methods and Data Source

Design

This was a panel study. Panel studies may be used to follow the same group of subjects over a period of time. They enable examination of changes or trends. These changes may be due to maturation of respondents or to changes in the environment. This panel study was a descriptive survey in that the major purpose was to describe the sample at two points in time on the variables of interest, which were identified in the objectives. Relationships among variables were also explored.

Instrumentation

A Student Information Questionnaire (SIQ) was developed to measure the variables in the research questions. The content validity was established by a panel of experts consisting of university faculty, school administrators, and former high school teachers. The instruments were pilot tested in a school that was not included in the sample for the study. An average test-retest coefficient of .84 was obtained across questionnaire items. The same instrument was used to gather data in 1985 and again in 1988.

Data Source

The sampling frame for rural schools included those Ohio schools located in a county outside a Standard Metropolitan Statistical Area. Schools had fewer than 125 students per class and were located in a county with less than 40,000 population, and offered agriculture as a high school subject. There were 52 schools in the population.

In the Spring and Fall of 1985 data were gathered from four randomly selected rural schools representing four different geographical regions in Ohio. The SIQ was administered to all of the tenth- and twelfth-grade students in each of the schools. Complete data were obtained for 425 subjects. In 1988, attempts were made to obtain permanent addresses for the 425 youth. Addresses were obtained for 352 individuals. Useable responses were obtained, after two mailings and telephone followup procedures, for 191 subjects (54 percent of the 352 for which addresses were available). All comparisons made between the 1985 and 1988 data were for the same 191 subjects. Comparisons between 1988 respondents and non-respondents were performed on the 1985 data. Respondents were more likely to be female, in the academic high school curriculum, and have a higher grade point average than non-respondents. The 1985 tenth graders were nearing graduation or just out of high school and the 1985 twelfth graders had been out of high school for three years at the time of the 1988 study.

Procedures to Reduce Errors

The authors were cognizant of the five types of errors normally associated with this type of research. Appropriate steps were taken to minimize them. Measurement error was controlled by establishing content validity and reliability of the measuring instrument. Based upon the sample size, sampling error was estimated based on a 95 percent probability of sampling estimates being within plus or minus 5.2 percent of the data for the population. Frame error was negligible since the listing of the population of Ohio rural schools was verified as meeting the selection criteria. Since random sampling procedures were used to select the schools and all students

in the tenth- and twelfth-grade classes in 1985 were sampled, selection error was not a problem. There was non-response error. Its nature was reported and documented.

Data Analysis

Information was summarized using frequencies, percentages, and statistics describing central tendency and dispersion. Relationships utilized correlational techniques. Coefficients were evaluated using an alpha level of .05.

Results

The findings from data gathered in 1985 for this group of students reported that rural schools in Ohio were emphasizing preparation for college attendance, enrolling students from families with low SES, having students with much higher educational and occupational aspirations than that which their parents had attained, having students with unrealistic expectations for salary, and having students whose aspirations were influenced by their parents' expectations for them (Odell, 1986).

Sources of Influence

In 1985 these youth, while in high school, had ranked the top four sources of influence on curriculum and career decisions as: self, parents, friends, and counselors. In 1988, the youth who had graduated listed self, mother and father, friends, and teachers as the top influencers. The youth who were twelfth graders and still in school in 1988 listed self, friends, father and mother, and counselors. The educational attainment of the mother was related to educational plans of their children. A Cramer's V of .32 was obtained between the educational attainment of the mother and plans of twelfth graders to attend college. Only 43.5 percent of the students having mothers with a high school education planned to attend college, but 100 percent of the students having mothers with a college or advanced degree planned to attend college. All of the students with mothers having a college or advanced degree planned to attend a four-year college or university. Most college-bound students with mothers having only a high school education chose either a two-year college (43.5 percent) or a four-year college or university (41.3 percent).

Changes in Desired and Expected Careers

Duncan Prestige Ratings as described by Stevens and Cho (1985) were used to score desired and expected occupational goals. Statistically significant differences were found between 1985 and 1988 data for both desired and expected career scores, and between desired and expected career scores for 1985 data. The difference between desired and expected career scores for the 1988 data was not statistically significant. In 1985, the rural young people desired careers with slightly higher prestige scores (46.0) than they expected to attain (43.5). They had higher expectations in 1988 (46.9) than in 1985 (43.5). Their desired career also had a higher score in 1988 (47.4) than in 1985 (46.0). Their expected career in 1988 (46.9) was more in line with their desired career (47.4).

Higher salaries were expected in their chosen careers in 1988 than in 1985. In 1988, 37.4 percent expected first-year incomes above $25,000; however, in 1985 only 16.7 percent of these same young people expected first-year incomes above $25,000.

In 1985, 39 percent of these youth intended to attend a two-year college. In 1988, only 5 percent had attended or planned to attend a two-year college. In contrast, only 10 percent planned to go to a four-year university in 1985, but 48 percent were attending or planned to attend one in 1988.

In 1985, more than 50 percent of the youth were unsure if they could achieve their expected occupations. In 1988, over 50 percent of the graduated youth were also unsure of whether they could achieve their expected occupations, but only 27 percent of the youth still in high school were unsure of achieving them.

Gender and Salary, Education, and Aspirations

There was a significant relationship between gender and salary expectations (Cramer's V=.46). Females expected lower salaries than males. Only 9.1 percent of the females expected a first-year salary in their chosen career to be above $25,000; however, 51.0 percent of the males expected a first-year salary above $25,000.

Females were more likely (86.4 percent) than males (68.9 percent) to attend college. Among high school alumni, 95.1 percent of the females and 88.9 percent of the males who attended college did so immediately after high school. Among 1988 high school seniors, 68.2 percent of the females and 53.3 percent of the males planned to enter college immediately following high school.

Males and females did not differ in Duncan Prestige Rating score on either desired or expected careers.

Curriculum and Aspirations

There was a statistically significant relationship between curriculum and aspirations (Cramer's V=.37) for senior students still in high school. High job aspirations on the Duncan Prestige Rating scale were held by 43 percent of the students in the academic curriculum and none of the students in the vocational curriculum. Low job aspirations were held

by 31 percent of the students in the vocational curriculum and 14 percent of the students in the academic curriculum. Medium job aspirations were held by 43 percent of the students in the academic curriculum and 69 percent of the students in the vocational curriculum. There was not a significant relationship between curriculum and job aspiration level for youth who had graduated from high school.

The high school curriculum followed by students was related to their educational plans. Nearly all (97.2 percent) of the students in the academic curriculum were likely to attend college; however, 46 percent of the students in the vocational curriculum were also likely to attend college. A four-year college or university was the choice of 71.2 percent of the academic program students. Students in the vocational program chose either a four-year college or university (24.0 percent) or a two-year college (20.0 percent). Senior students in the academic program planned to attend college immediately after high school (83.3 percent), but only 30.8 percent of the vocational program students planned to begin college immediately. Among graduates, 93.5 percent of those who went to college did so immediately after high school.

Discussion of Results

Sources of Influence

School personnel appear to have less influence on student career and curriculum choices than parents and friends. The influence of school personnel appears to decline as students mature. Friends seemed to have had more influence on curriculum and career decisions in 1988 than 1985 for youth still in school and less influence on youth who had graduated.

Parents should be involved in educational and career planning with their children. They have a major influence on their children's decisions. Schools need to maintain communication with parents about options so intelligent input can be given to youth by their parents.

Friends and peers also seem to influence the educational and career decisions of youth. Efforts should be made to build up the self image and confidence of youth so that they can make decisions about careers without relying too heavily on others.

Because the educational level of the mother appears to be related to educational plans of students, schools should make a special effort to encourage students from homes where mothers possess less than a college degree to set high aspirations.

Changes in Desired and Expected Careers

Overall aspirations tended to increase with increasing maturity. Salary expectations also seemed to increase with increasing maturity. Expected occupations also became more in line with desired careers. The two-year college became a less popular choice and the four-year university a more popular choice for students as they matured. It appears that students should be encouraged to set high aspirations. Expectations seem to come more in line with aspirations as students mature. This seems to be a result of higher expectations rather than decreased aspirations.

High school seniors appear to be more confident of fulfilling their aspirations than graduates or students who are sophomores.

Gender and Salary, Education, and Aspirations

Even though females aspire to careers that are equivalent to males, and even though they are more likely to attend college than males, they expect lower salaries. Females should be encouraged to set higher salary goals.

When aspirations and qualifications appear equal, salary expectations remain lower for females than males. This may be partially due to females choosing occupations that are sex stereotypic, and thus traditionally offering a lower salary than conventionally male occupations.

Curriculum and Aspirations

The curriculum followed in high school was associated with the level of job aspirations of students. Those youth in the academic curriculum had much higher aspirations than those in the vocational curriculum. Once students left high school, however, the difference in level of job aspirations between those who completed the academic and vocational curricula was less.

Students in the vocational curriculum were much less likely to attend college than students in the academic curriculum. However, nearly one-half of the students in the vocational curriculum planned to attend college.

It appears that students in the vocational curriculum should also be encouraged to prepare for college attendance. Schools should develop options for students to complete both vocational education and college preparatory requirements. Many students change their aspirations relating to college and career during high school.

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Participation in Vocational Education by Rural Public High School Students

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High school graduation requirements increased throughout the United States as a result of The National Commission on Excellence in Education's report, "A Nation at Risk" (The National Commission on Secondary Vocational Education, 1984). This increase created additional burdens for high school students, especially those contemplating enrolling in elective courses. Students pondering college needed to complete classes in addition to those required for graduation in order to meet entrance requirements.

Only limited information was available concerning factors influencing rural public high school students to enroll in vocational education. Some of the notable reasons from a review of the literature included: (a) to learn a specific skill, (b) job opportunities, (c) prevocational experiences, (d) influence of counselor or friends, (e) impressed by visit to vocational center, and (f) needed a course to fill class schedule. Factors curtailing enrollment were: (a) having to travel to a joint vocational school, (b) low quality of vocational courses, and (c) amount of time in the school day devoted to vocational education.

National Study

The objective was to relate the individual characteristics of graduates with the proportion of course work completed in vocational education.

Procedures

Two surveys were used. The High School and Beyond (HS&B) survey involved approximately 28,000 high school seniors and 30,000 sophomores originally interviewed in 1980. Since that time, follow-up surveys were conducted every two years. Transcript information was collected from a representative sample (18,427) of the original 30,000 sophomores interviewed in 1980. This study utilized data from 1372 rural public school students who graduated in 1982.

The National Survey of Labor Market Experience-Youth Cohort (NLS) contained 12,868 individuals ranging in age from 14-21 years at the time of the first interviews in 1979. Follow-up interviews occurred annually from 1979 to 1985. Transcript data were collected from over 80 percent of the members representing the sample. This study used data from 309 rural public high school students who were in the NLS cohort.

The dependent variable for the regression analysis was the proportion of time a student spent in vocational courses. This was calculated by dividing the number of vocational credits by the total number of credits earned during high school. For descriptive purposes, respondents were classified as vocational education graduates if they completed over 12.5 percent of their course work in vocational education.

Factors used as independent variables were: community unemployment rate, self esteem, absenteeism, grade point average (GPA) in 10th grade, grade point average in 12th grade, grade point average in specialty, who the student lived with at age 14, where the student lived at age 14, desired job at age 35, locus of control, perceptions of approval from significant others on the decision to attend college and to enter the labor market after high school, hours watching TV, father's occupation, membership and involvement in vocational education youth organizations, participation in vocational work experience programs, and scores on achievement tests. Factors over which respondents had little or no control such as race/ethnicity, gender, socioeconomic status (SES), size of school, year of graduation, and residential location served as control variables.

Validity and reliability for the selected variables were documented in the *HS&B Data File User's Manual* and the *NLS Data File User's Manual*.

Numeric data were analyzed using the Statistical Packages for the Social Sciences/PC+(SPSS, Inc., 1987). The primary methods of statistical analyses were descriptive, correlation, one-way ANOVA, Chi-square, t-test, and multivariate regression (alpha=.05).

Results

In the NLS data base, achieving higher achievement test scores, being classified as a Hispanic or Native American, and not having data a GPA available for a vocational specialty were negatively associated with completing higher proportions of vocational education courses. Completing higher proportions of vocational education courses was positively associated with vocational work experience programs and high absenteeism.

Variables that were positively associated with completing higher proportions of vocational education courses in the HS&B data base included: membership and leadership roles in vocational youth organizations,

participation in vocational work experience programs, the desire to work in a vocational job at age 35, and classification as a white or Hispanic female. Variables that were negatively associated with completing higher proportions of vocational education courses included: higher self-esteem ratings, higher SES ratings, higher achievement test scores, educational aspirations, students without absenteeism records, respondents residing in the South, West, and Northeast, and being classified as a Hispanic male.

Discussion

Vocational education attracts individuals from lower SES and ability levels. This pattern will continue to be the norm unless major substantive changes occur in vocational education. Vocational education is perceived to provide training for jobs and restrict advancement to higher education. Placing vocational and academic education on separate campuses proliferates the image that vocational education is for lower ability persons.

Ohio Study

Objectives of the Ohio study were to (1) compare the individual characteristics of rural public high school students who planned to complete high proportions of their course work in vocational education at comprehensive schools with those students who intended to complete high proportions of their course work in vocational education at vocational schools (JVS), and (2) determine the reasons students enroll in vocational education courses.

Procedures

The population included 52 Ohio rural high schools. Eight of these were randomly selected. Fifteen sophomore students who were planning to enroll in vocational education during their junior year were randomly selected from each school. These students were the sample. On the day of the interviews, 105 of the 120 students were present with parental permission approval forms. A questionnaire assessed individual characteristics and a face-to-face survey determined the reasons why students enrolled in vocational education courses.

Results were analyzed using qualitative methods. Categories developed as the results emerged from the data.

Results

Students going to the JVS their junior year came from families with a lower SES rating than those students who planned to complete high proportions of vocational education at comprehensive schools. Students planning to attend the JVS had lower GPAs than students who planned to remain at their home schools their junior year.

Job preparation ranked as the number one reason (58 percent) why Ohio students enrolled in vocational education courses. Enjoyment of vocational subject matter and the environment in which the vocational education courses were taught ranked second (52 percent). Students also enrolled for personal reasons, monetary benefits, perceived ease of grades, attraction of affiliated youth organizations, preparation for education beyond the secondary level, positive prior experiences with vocational teachers, and contacts with individuals in vocational trades. Students believed that enrollment in vocational education should help them acquire jobs, yet not prevent them from attending college. However, most students were uncertain if their present curriculum plans would meet college entrance requirements.

Discussion

Many students enroll in vocational classes for reasons other than job preparation. This discrepancy between reasons for enrollment and current definitions of vocational education needs further exploration. Students appear to enroll in courses they need and find interesting. They do not perceive vocational education as closing options for further education beyond high school.

Recommendations

Research indicated that a blend of academic, general, and vocational courses prepares students for life better than a concentration in any one area. Joint vocational schools in Ohio should evaluate the percentage of the school day spent on vocational instruction to determine if additional time might be allocated to the areas of general and academic instruction.

Students have many purposes for enrolling in vocational education. Many in society do not understand that vocational education helps students in many ways unrelated to job preparation. These ways that vocational education prepares students for life need to be agreed upon and communicated to the public.

State school systems should be cautious about segregating students into campuses based upon their SES. The dual educational system may be counterproductive in preparing students for a democratic society.

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Characteristics of Rural High School Seniors in Ohio and Southwest Georgia

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Thomas (1987) observed that since the 1970s rural populations have declined, rural economies have suffered as a result of the agricultural economy, and school budgets have been hard hit as a direct result of mandated state education agency changes in graduation requirements. Although the above mentioned forces and factors have contributed to financial hardships in rural areas, rural schools have continued to serve a very important population in this country. Carmichael (1982) disclosed that 53 percent of the school children classified as "educationally deprived" reside in rural areas.

Previous researchers have revealed that there is a great deal of variability between rural schools in different regions of this country. Parks (1983) asserted that region is useful as a predictor of school experiences. In terms of region, the lowest quality of education has been identified as being in the south (Bedics, 1987). Traditionally, there is less public support for education in the south (Parks, 1983). Marion (1979) indicated that, when compared to northern states, rural education in the south is of poorer quality and that rural southern Whites and Blacks consistently fall below national norms on standardized exams. Unfortunately, there has not been a great deal of comparative research conducted on rural schools in differing regions.

Student demographics have been pointed out as a contributing factor in the diversity in rural education. Student demographic differences tend to limit the generalizability of research findings conducted in various regions (Odell, 1986; Lee, 1984). MacBrayne (1987) warned that researchers should be cautious when generalizing findings due to differences in populations between regions.

DeBoard, Griffin and Clark (1977) revealed that family background influences occupational expectations and aspirations. Relatedly, family socioeconomic status (Little, 1969), family expectations (Yang, 1981), and racial background (Lee, 1984) have been found to impact student career aspirations and expectations.

In 1986, Odell suggested that educational and occupational aspirations significantly influenced students' occupational and educational attainment. Consequently the determination of educational and occupational aspirations is useful as a measure of attainment.

Agriculture is extremely important to the economy of many rural areas. However, most career opportunities for students in rural areas are production oriented (National Research Council, 1988). As a result of the farm crisis in recent years, many rural students perceive careers in agriculture to be limited to farming and thus discount agriculture as a viable career alternative. Research conducted by Coulter, Stanton, and Goecker (1986) revealed that there are many job opportunities for students with an education in agriculture.

Purpose and Objectives

This research describes student demographics, occupational and educational aspirations and expectations of rural school students in Southwest Georgia and Ohio.

The specific objectives were to: (1) describe the personal, educational, and family background characteristics of rural seniors in Southwest Georgia and Ohio, and (2) assess the level of occupational and educational aspirations and expectations of rural seniors in Southwest Georgia and Ohio.

Procedures

Population and Sample

The accessible population in Southwest Georgia was 19 rural districts in the Southwest Region meeting the following criteria: (1) schools were located in a county outside a Standardized Metropolitan Statistical Area (SMSA), (2) schools had an average class size of less than 200 students, and (3) schools were located in a county with a population less than 40,000. Simple random sampling was used in selecting the five schools in the study. The accessible population in Ohio consisted of 71 rural districts, of which 10 were randomly selected. Similar criteria was followed as reported above was used to select Ohio schools except that class size was less than 125. In each rural high school in Southwest Georgia and Ohio, the twelfth-grade students were the subjects. All subjects

were enrolled in the 1988-89 school year. Data were collected from a census of all senior class members.

Instrumentation

Information was collected from a student questionnaire and school records. The questionnaire was a modified instrument originally designed by Odell (1986). A panel of experts was used to establish the content validity of the questionnaire. The questionnaire was pilot tested for reliability. The test-retest reliability coefficients ranged from .81 to .84.

Data Collection

Data were collected between February-May 1989. Data were obtained on 267 rural students from Southwest Georgia and 529 rural students from Ohio.

Results

Student Ethnicity

Seventy-three percent of the students in Southwest Georgia were Black and 24 percent were White. More than 94 percent of the Ohio students were White.

Program Enrollment

Thirty-eight percent of the Southwest Georgia students were enrolled in academic programs, followed by 33.5 percent in general, and 27.4 percent in vocational programs. In Ohio, program enrollment was as follows: academic (58.0 percent), general (22.9 percent), and vocational (19.1 percent).

Parental Educational Attainment

In Southwest Georgia, 22.5 percent of the fathers and 14.6 percent of the mothers had less than a high school education. Among parents in Ohio, 13.5 percent of the fathers and 7.1 percent of the mothers had less than a high school education.

Parental Expectations

About 72 percent of the students in Southwest Georgia indicated that their parents expected them to advance their education after high school while only 7.5 percent reported that their parents did not expect them to advance their education after high school. In Ohio, almost 61 percent believed that their parents expected them to advance their education after completing high school while about 23 percent did not believe that their parents expected them to continue their education after completing high school.

Status of Parental Occupations

Based upon a prestige scale of occupations developed by Stevens and Cho (1985), Ohio students were at a higher socioeconomic level than Southwest Georgia students.

Status of Idealistic and Realistic Expected Student Occupations

Ideally, Ohio students aspired to higher status occupations than did Southwest Georgia students (Stevens and Cho, 1985). In terms of the occupations which students truly expected to enter, Ohio students expected to enter higher status occupations than did students in Southwest Georgia.

Advanced Educational Plans

More than 32 percent of the Southwest Georgia students indicated that they expected to attend a four-year college and 40.4 percent indicated that they expected to attend a two-year technical or junior college. Over 47 percent of the Ohio students on the other hand expected to attend a four-year college and less than 33 percent indicated that they expected to attend a two-year technical or junior college.

Agriculture as a Career

Twelve percent of the Southwest Georgia students were interested in agriculture as a career contrasted with less than 2 percent of the Ohio students. Slightly over 3 percent of the Ohio students indicated an interest in agriculture as an area of advanced study, while none of the Southwest Georgia students expressed an interest in agriculture as an area of advanced education.

Expected Occupational Income

Almost 46 percent of the Southwest Georgia students expected to receive an income of greater than $25,000, where about 27 percent of the Ohio students expected to receive such an income.

Time of Advanced Education

Less than half of the Southwest Georgia students expected to continue their education immediately after high school compared to almost 62 percent of the Ohio students planning on immediately continuing their education after high school.

Conclusions

Based upon the findings, the following conclusions are drawn: (1) in terms of ethnicity, Ohio students were much more homogeneous in nature than Georgia students, (2) the majority of Ohio students were enrolled in academic programs while the Georgia students were much more equally distributed among academic, general, and vocational programs, (3) a higher percentage of Ohio parents were high school completers than Georgia parents, (4) Ohio parents had lower expectations for their children to advance their education than Georgia parents, (5) Ohio students tended to live in higher status homes and had higher socioeconomic status expectations regarding careers than Georgia students, (6) Ohio students were more inclined to attend four-year colleges whereas Georgia students were more inclined to attend two-year technical or junior colleges,

(7) a small percentage of Ohio students expected to advance their education in agriculture whereas none of the Georgia students had such plans. Georgia students were, however, more interested in agriculture as an occupational choice than Ohio students, (8) Ohio students expected lower occupational incomes than Georgia students, and (9) a higher percentage of Ohio students expected to advance their education immediately after completing high school than Georgia students.

Recommendations

The following recommendations are forwarded: (1) Ohio rural schools should incorporate a multicultural component into the curriculum due to the homogeneity of the community population, (2) Ohio rural schools should improve the attractiveness of vocational education as a secondary program alternative, (3) Ohio rural students must be made aware of the broad range of career opportunities, (4) rural parents should be provided greater opportunities from public schools to explore possible avenues of advanced education and financial aid availability, (5) two-year colleges in Ohio should be more conveniently located and/or offer more college transfer programs in order to improve their attractiveness to rural students, (6) colleges of agriculture in both states should work more closely with rural schools to educate students as to how rural backgrounds can be beneficial in developing career opportunities in agriculture, (7) Georgia rural students need career counseling to insure more realistic salary expectations based upon career and educational aspirations, and (8) Georgia rural students and parents need to receive educational guidance and financial aid information to encourage more students to consider advanced education immediately after high school.

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High School Curriculum and Aspirations of Students in Ohio and Southwest Georgia

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Students develop educational and occupational plans that build upon their backgrounds of experiences (Odell, 1988). The life experiences of secondary students have been determined in part by the families of which they are members, the communities in which they live, and the schools that they attend. These life experiences manifest themselves in the educational and occupational expectations of students (p. 17). Yang (1981) reported that the decision of rural youth to enter college was strongly influenced by the expectations of their parents. Lee (1984) advised that "parents, regardless of their racial background, need to be fully aware of their influence on the aspirations and expectations of young men and women" (p. 33).

Kotrlik and Harrison (1989) concluded that students perceive that their parents influence their career choice more than any other person, and the mother is more influential than the father. Most students also perceived that their parents, teachers, and counselors were all encouraging college attendance after graduation from high school. Interest in the work, working conditions, salary/wages, and personal satisfaction were the leading factors considered by seniors when selecting a career (pp. 60-61).

Social class is closely related to occupation. Indeed, most students of social class behavior agree that as a single measure of the overall complex of class behavior, a scale of occupations is clearly the most efficient instrument to use. Managers and professionals tend to be upper class or upper middle class. Skilled workers, semiprofessionals, small proprietors, and white-collar workers most frequently are lower middle class. Semiskilled workers are frequently upper lower class, and those people who work only when they choose to do so are usually lower class. The higher the social class, the higher the income, education, material possessions, and status (Evans and Herr, 1978, pp. 119-120).

Evans and Herr (1978) identify factors associated with low occupational status that are readily modifiable by schools as: low educational attainment, low occupational skill and knowledge, low awareness of occupational opportunities, and little understanding of effects of absenteeism, productivity, promptness, etc. (p. 122). Low aspirations of parents for their children was listed as a factor modifiable to a certain extent by schools.

What extent does the school play in forming the aspirations of students? Miller (1974) contended that schools are occupationally prejudiced and thus may influence students in ways that may not be in their best interests.

Has occupational prejudice become a product of our educational system? Many educators at first thought would say that such an idea has little foundation . . . . Most educators have different value hierarchies than employees in the nonprofessional occupations . . . (and thus they) project prejudice toward nonprofessional occupations . . . . There has developed within the educational system a gradation of more and less favored occupations . . . . It seems reasonable to assume that occupational prejudice has been taught in the educational system, if for no other reason than the complete lack of any effort not to teach it (pp. 41-42).

Students whose "records" showed high grades or high socioeconomic status were most frequently assigned to college preparatory classes . . . . It seems likely that teachers play a role in assigning students on the basis of sex, grades, and socioeconomic status (Evans and Herr, 1978, pp. 218-219).

Barcinas (1989) concluded that urban students have higher educational and occupational aspirations than rural students. He also found that students enrolled in academic programs had higher educational and occupational aspirations than students enrolled in vocational and general curricula. Similar findings were reported by McCracken and Fails (1989); however, they reported that once students left high school, the difference in level of job aspirations between those who completed the academic and vocational curricula was less than it had been during high school.

High School Curriculum

"The history of education shows an uneasy relationship between general and vocational education" (Evans and Herr, 1978, p. 51). This

uneasy relationship has resulted in few genuinely comprehensive schools. Most schools have offered a college-preparatory or academic curriculum for the college-bound student, a vocational education curriculum for the student who desires to prepare for work, and a general curriculum for everyone else. Of the three, the general curriculum has received the most criticism.

The general curriculum in the secondary school has so little to commend it that it is sure to disappear. Both the vocational and the college preparatory curricula are expanding slowly, and this expansion comes at the expense of the general curriculum . . . . The general curriculum . . . has by far the lowest rate of college attendance by its graduates (Evans and Herr, 1978, p. 319).

Weber (1988) reported results which suggested:

the dropout rate for students in the general curriculum is significantly greater than the dropout rate for students in the vocational curriculum, which in turn is significantly greater than the dropout rate for students in the college preparatory curriculum; and the vocational curriculum is serving students whose family SES, academic achievement as of the 10th grade, and parents' education levels are all significantly lower than those of students in the other curricula. Also, the proportions of minority students served via the vocational curriculum is significantly greater than the proportions of minority students served in either the general or college-preparatory curricula (p. 44).

After analyzing two national data bases, Elliot (1988) concluded that rural individuals who completed higher proportions of vocational education were more likely to score lower on achievement tests and be from lower SES families than those graduates who completed lower proportions of vocational education. He also reported that rural public high school students believed that enrollment in vocational education would help them acquire jobs, yet not prevent them from attending college.

Stone (1988) reported that the variance in achievement in Grade 12 could not be explained by curriculum participation between Grades 10 and 12, when socioeconomic background characteristics and achievement in Grade 10 were controlled. Also, no influence of the curriculum on occupational aspirations was found.

Jyung (1989) found strong correlations between curriculum and educational aspirations ($r=.55$) and vocational aspirations ($r=.51$) for 10th graders. Even stronger associations were found for 12th graders ($r=.63$ and $r=.71$, respectively). No differences were found between urban and rural students on either career maturity or scholastic achievement.

Problem

Research has been consistent in reporting a relationship between socioeconomic background factors and aspirations. A relationship has also been shown between socioeconomic background factors and high school curriculum. Students from a higher SES background are more likely to enroll in the academic curriculum. Students from a lower SES background are more likely to enroll in the vocational or general curricula. The relationship between high school curriculum and aspirations has been less clear, but one would expect that students in the academic curriculum would have higher aspirations than students in the general or vocational curricula. Educational and occupational aspirations may be viewed as two different constructs. Several variables might be used to obtain a more complete measure of each construct. For the purposes of this study, level of job expectations, level of job aspirations, expected income, surety of employment, and age of occupational choice were considered to be measures of occupational aspirations. Plans for advanced education, type of advanced education planned, and when advanced education would begin were considered to be measures of educational aspirations. The major purpose of this research was to describe the relationships between high school curriculum (academic, general, and vocational) and students' occupational and educational aspirations. A secondary purpose was to explore the relationships between student background factors and choice of high school curriculum.

Objectives

The studies were conducted to answer the following research questions:

1. Is student choice of high school curriculum related to gender, ethnic background, socioeconomic status, education level of parents, parental expectation for student to pursue advanced education, parental discussions with students about advanced education, and grade point average?
2. Is student choice of high school curriculum related to job expectations, job aspirations, expected income, surety of employment, and grade level at which occupational choice was made?
3. Is student choice of high school curriculum related to plans for advanced education, type of advanced education planned, and when advanced education would begin?

Two replications were conducted using similar procedures. Ohio rural schools was the population for the first study. A second study was conducted with rural schools in *Southwest Georgia*.

Replication #1, Rural Students in Ohio

Methods and Data Source

Data Source

The definition used in Ohio was that rural schools were located in counties with less than 40,000 population and outside a Standard Metropolitan Statistical Area. Also, the average enrollment per grade level at the secondary level was not to exceed 125 students. Seventy-one rural high schools were in the frame. Cluster sampling was used. Ten schools were randomly drawn. All schools agreed to participate. The sample consisted of all of the seniors in the high school class of 1989.

Instrumentation

The questionnaire was adapted from the work of Odell (1986). Content validity was established by a panel of experts consisting of university faculty members, school administrators, and former high school teachers. Pilot testing for suitability and reliability was conducted with students in schools not included in the sample. The test-retest reliability coefficient was .84.

The academic records of the students were used to obtain grade point averages. Grade point averages were verified by the school principals.

Data Collection

Data were collected during the months of March through May 1989. An introductory letter was mailed to each principal in the schools which had agreed to participate. A telephone call was then made to discuss the study, data collection procedures, instruments, and the principal's questions. A second telephone call was used to schedule a personal visit with a designated contact person. The personal visit was made by the researcher to deliver the questionnaires, provide parental permission forms, give instructions for recording student grade point averages and leave a mailing package for the return of the completed instruments. Five hundred twenty-nine of the 767 Ohio rural senior students from the 10 schools provided signed parental permission forms and completed the questionnaires for a 69 percent response rate.

Control of Errors

A number of errors normally associated with descriptive survey research were considered. Content validity and test-retest reliability were established to control measurement error. Sampling error can result when a sample is not representative of the population. Random selection of the rural schools and use of the population of senior high school students from each of the schools yielded a 95 percent probability of sampling estimates within plus or minus 3.5 percent of the population values. Frame and selection errors were controlled through use of a published directory of schools and use of all senior students on the class lists of the selected schools. All schools in the frame had an equal probability of being selected. The chief source of error was non-response error. Because of the need to secure parental permission forms, a higher rate could not be obtained within the resources allocated to the project. The reader should be cautioned that some bias in findings may result because 31 percent of the sample failed to respond.

Data Analysis

Data were described using frequencies, percentages, means, and standard deviations. One-way analysis of variance with post-hoc analysis on interval data and chi-square on nominal data were used to discover significant differences between academic, general and vocational students on other variables.

Results

Background Characteristics

A higher percentage of females (59 percent) were in the academic curriculum than males (Table 1). However, a higher percentage of males (69 percent) were in the general curriculum than females. An equal percentage of males and females were enrolled in the vocational curriculum. Most of the sample was white. The percentage of whites in the various curricula (Table 1) were: academic, 97 percent; general, 89 percent; and vocational, 94 percent. Non-whites were more likely to be enrolled in the general education curriculum.

The occupations reported for fathers and mothers were assigned a socioeconomic status (SES) index level developed by Stevens and Cho (1985). Values from zero (low status) through 96 (high status) were assigned to occupations. Mean SES scores for students in the various curricula (Table 1) were: academic, 35; general, 26; and vocational, 25. Post hoc analysis reveal that the values for the general and vocational groups did not differ from each other, but both were significantly different on SES from students enrolled in the academic curriculum. Students in the academic curriculum were also significantly higher in grade point average (2.97) than students in the general (2.13) and vocational (2.29) curricula.

There was a small, but statistically significant, difference among the three groups in mother's educational level (Table 1). Only 15 percent of the students in the general curriculum had mothers with more than a high school education, while 27 percent of the vocational curriculum students and 33 percent of the academic curriculum students had mothers with more than a high school education. However, the educational level of the fathers showed a different pattern (Table 1). Only 16.5 percent of the vocational curriculum students

Table 1. High School Curriculum and Background Characteristics of Rural Twelfth-Grade Students in Ohio (n=529)

	Curriculum			
Background Characteristics	Academic (n=307)	General (n=121)	Vocational (n=98)	prob.
Gender				
Female	59.0%	31.4%	50.0%	$p<.05$[1]
Male	41.0%	68.6%	50.0%	
Ethnic Background				
White	97.4%	89.2%	93.9%	$p<.05$[1]
Non-White	2.6%	10.8%	6.1%	
Socioeconomic Status				
mean	34.58	26.08[a]	24.85[a]	$p<.05$[2]
s.d.	9.63	13.58	13.79	
Grade Point Avg.				
mean	2.97	2.13[a]	2.29[a]	$p<.05$[1]
s.d.	0.58	0.55	0.62	
Mother's Education				
Less than High School	4.2%	12.6%	9.3%	$p<.05$[1]
High School	58.6%	58.8%	56.7%	
Business/Tech. School	11.7%	5.9%	15.5%	
Jr./Two-Year College	6.5%	3.4%	5.2%	
Four-Year College	12.1%	3.4%	3.1%	
Advanced Degree	2.9%	2.5%	3.1%	
Do Not Know	3.9%	13.4%	7.2%	
Father's Education				
Less than High School	9.1%	16.7%	24.7%	$p<.05$[1]
High School	53.4%	49.2%	47.4%	
Business/Tech. School	9.8%	10.0%	4.1%	
Jr./Two-Year College	6.2%	7.5%	3.1%	
Four-Year College	13.0%	2.5%	7.2%	
Advanced Degree	5.2%	2.5%	2.1%	
Do Not Know	3.3%	11.7%	711.3%	
Parental Expectation				
Yes	81.8%	34.2%	27.6%	$p<.05$[1]
No	11.1%	37.5%	40.8%	
Not Sure	7.2%	28.3%	31.6%	
Parental Discussions				
None	1.6%	13.3%	10.2%	$p<.05$[1]
Very Little	6.8%	13.3%	21.4%	
Some	47.6%	50.0%	46.9%	
A Great Deal	44.0%	23.3%	21.4%	

Note. Test of significance: 1=chi-square, 2=One-way ANOVA.
Missing cases=3.
[a]Groups do not differ significantly.

had fathers with more than a high school education while 34 percent of the academic curriculum students and 22.5 percent of the general curriculum students had fathers with some education beyond high school.

A large majority (82 percent) of the academic curriculum students knew their parents expected them to further their education beyond high school (Table 1), but only 34 percent of the general curriculum and 28 percent of the vocational curriculum students had parents with such expectations. It was also apparent that students in the academic curriculum (92 percent) had discussed their educational plans with their parents (Table 1) more than students in other curricula (73 percent, general, and 68 percent, vocational).

Aspirations

SES index scores (Stevens and Cho, 1985) were used to compare students in the various curricula on their occupational choices. Two variables were measured. The first, job expectations, was the variable measuring the occupations the students actually thought they would enter. The second, job aspirations, was the variable measuring the occupations the students wanted to enter. Expectations and aspirations differed the most for students in the vocational curriculum (Table 2). For students in the academic curriculum, job expectation scores averaged 62 and job aspiration scores averaged 63. For students in the general curriculum, the mean expectation score was 45 and the mean aspiration score was 52. Vocational curriculum students had a mean expectation score of 38 and a mean aspiration score of 48. Business was the most popular choice for an area of advanced study by students in all three curricula.

An annual income over $25,000 in their chosen career was expected by 32 percent of the academic program students (Table 2), 28 percent of the general program students, and 12 percent of the vocational program students. A higher percentage of academic program students (66 percent) were sure of finding employment in their chosen career than vocational program students (55 percent). Vocational program students made their career choice at a slightly younger age than academic program students.

The percentage of students in the three curricula planning advanced education (Table 2) were: academic, 93 percent; general, 45 percent; and vocational, 47 percent. A junior or technical college was the choice of 55 percent of the vocational students (Table 2), 48 percent of the general students, and 23 percent of the academic students. Students in the academic curriculum were more likely to begin their advanced education immediately after high school (Table 2).

Replication #2, Rural Students in Southwest Georgia

Methods and Data Source

Data Source

The definition of rural schools used for the study conducted in Southwest Georgia was the same as the one used in Ohio, with one exception. Because the schools in Georgia were often in districts having two or three counties, schools were still considered to be rural if the average class size was 200 or less, rather than the 125 or less criterion used in Ohio. Information was collected from the Georgia Department of Education to identify the schools meeting the criteria. Nineteen rural high schools in 26 counties were listed as the frame. Five schools and five alternates were randomly drawn. Two schools did not agree to participate so two alternate schools were used. The sample consisted of the seniors in the class of 1989 in the five schools.

Instrumentation

The same questionnaire was used as in the study of Ohio rural students. It was pilot tested in a school in Georgia that was in the population but not the sample. The test-retest percent of agreement reliability coefficient was .81. Grade point averages were not used because the schools in the study did not use a consistent grading system.

Data Collection

Data were collected in the Spring of 1989. The researcher visited each of the schools. The questionnaires were administered in classes by either the researcher, the school counselor, or homeroom teachers. The five schools had 330 senior students in the class of 1989. A total of 266 returned parental permission forms and completed the questionnaires for a 83.5 percent response rate.

Control of Errors and Data Analysis

Errors normally associated with survey research of this nature were controlled in the Georgia study in a manner similar to the Ohio study. For this sample there was a 95 percent probability of sampling estimates within plus or minus 5 percent of the population values. Data were analyzed using the same procedures as in the Ohio study.

Results

Background Characteristics

In Southwest Georgia, there was no relationship between gender and curriculum of enrollment (Table 3). The senior class of 1989 contained more females (54 percent) than males (46 percent). Most of the sample

Table 2. High School Curriculum and Aspirations of Rural Twelfth-Grade Students in Ohio (n=529)

Aspirations	Curriculum			prob.
	Academic (n=307)	General (n=121)	Vocational (n=98)	
Job Expectations				
mean	62.38	44.75	38.13	$p<.05^2$
s.d	18.02	21.12	17.32	
Job Aspirations				
mean	63.29	51.66[a]	48.30[a]	$p<.05^2$
s.d.	17.65	21.07	22.93	
Income Expected				
Less than $15,000	8.2%	20.2%	28.9%	$p<.05^1$
$15,000-$19,999	31.1%	27.7%	34.0%	
$20,000-$24,999	28.5%	24.4%	24.7%	
$25,000-$29,999	15.7%	14.3%	4.1%	
$30,000-$34,999	9.5%	7.6%	5.2%	
Over $35,000	6.9%	5.9%	3.1%	
Employment Surety				
Completely Sure	16.9%	19.3%	15.3%	$p<.05^1$
Very Sure	49.8%	41.2%	39.8%	
Not Sure	30.3%	37.0%	40.8%	
Very Unsure	2.3%	2.5%	2.0%	
Completely Unsure	0.7%	0.0%	2.0%	
When Occupational Choice Was Made				
Have Not Decided	3.9%	7.6%	8.2%	$p<.05^1$
Prior to Sixth Grade	3.9%	5.0%	1.0%	
Seventh or Eighth	5.9%	5.0%	9.2%	
Ninth or Tenth	21.5%	22.7%	29.6%	
Eleventh or Twelfth	64.8%	59.7%	52.0%	
Plans for Advanced Education				
Definitely Will Attend	77.2%	25.0%	16.3%	$p<.05^1$
Likely to Attend	16.0%	20.0%	30.6%	
Not Sure	4.9%	34.2%	23.5%	
Not Likely to Attend	1.0%	13.3%	17.3%	
Definitely Will Not Attend	1.0%	7.5%	12.2%	
Type of Advanced Education Planned				
Junior College	6.5%	4.2%	2.0%	$p<.05^1$
Technical College	16.9%	44.2%	53.1%	
Four-Year University	69.4%	24.2%	6.1%	
Do Not Know	5.9%	15.0%	19.4%	
Don't Plan to Attend	1.3%	12.5%	19.4%	
When Advanced Education Would Begin				
After High School	84.0%	33.3%	26.5%	$p<.05^1$
After Military Service	5.5%	10.8%	1.0%	
After Working Few Years	4.9%	16.7%	19.4%	
No Definite Plans	4.6%	26.7%	35.7%	
Don't Plan to Attend	1.0%	12.5%	17.3%	

Note. Test of significance: 1=chi-square 2=One-way ANOVA.
Missing cases=3.
[a]Groups do not differ significantly.

was black (Table 3). The percentage of non-whites in the various curricula were: academic, 66 percent; general, 84 percent; and vocational, 79 percent. Non-whites were more likely to be enrolled in the general curriculum.

Mean SES scores for students in the various curricula (Table 3) were: academic, 31; general, 25; and vocational, 20. Post hoc analysis revealed that the general and vocational groups did not differ from each other, but both were significantly different on SES score from students in the academic curriculum.

Differences among the students in the three curricula were not significant on educational level of mother (Table 3). The percentages of fathers having more than a high school education by curricula were: academic, 33 percent; general, 19 percent; and vocational, 22 percent. Fathers of students in the academic curriculum had a higher level of education than the fathers of students in the other curricula (Table 3).

Table 3. High School Curriculum and Background Characteristics of Rural Twelfth-Grade Students in Southwest Georgia (n=267)

	Curriculum			
Background Characteristics	Academic (n=101)	General (n=89)	Vocational (n=76)	prob.
Gender				
Female	55.4%	51.1%	54.7%	$p>.05$[1]
Male	44.6%	48.9%	45.3%	
Ethnic Background				
White	33.7%	15.7%	21.1%	$p<.05$[1]
Non-White	66.3%	84.3%	78.9%	
Socioeconomic Status				
mean	30.88	24.75[a]	19.79[a]	$p<.05$[2]
s.d.	17.5	14.38	11.52	
Mother's Education				
Less than High School	9.9%	13.8%	22.4%	$p>.05$[1]
High School	56.4%	63.2%	63.2%	
Business/Tech. School	9.9%	5.7%	6.6%	
Jr./Two-Year College	11.9%	6.9%	3.9%	
Four-Year College	6.9%	3.4%	3.9%	
Advanced Degree	5.0%	6.9%	0.0%	
Father's Education				
Less than High School	20.8%	19.8%	29.7%	$p<.05$[1]
High School	46.5%	61.6%	48.6%	
Business/Tech. School	5.9%	5.8%	17.6%	
Jr./Two-Year College	6.9%	3.5%	1.4%	
Four-Year College	13.9%	5.8%	2.7%	
Advanced Degree	5.9%	3.5%	0.0%	
Parental Expectation				
Yes	90.1%	65.2%	56.6%	$p<.05$[1]
No	1.0%	9.0%	14.5%	
Not Sure	8.9%	25.8%	28.9%	
Parental Discussions				
None	1.0%	3.4%	2.6%	$p<.05$[1]
Very Little	8.9%	28.1%	14.5%	
Some	32.7%	39.3%	56.6%	
A Great Deal	57.4%	29.2%	26.3%	

Note. Test of significance: 1=chi-square 2=One-way ANOVA.
Missing case=1.
[a]Groups do not differ significantly.

Nearly all (90 percent) of the academic curriculum students knew their parents expected them to further their education beyond high school (Table 3). Most of the parents of students in the general (65 percent) and vocational (57 percent) curricula also had parents who wanted them to continue their education. The percentage of students in the academic curriculum that had discussed their educational plans with their parents (Table 3) was 90 percent. This was compared with 68 percent in the general curriculum and 83 percent in the vocational curriculum.

Aspirations

Students in the academic curriculum aspired to jobs having a mean SES index score of 58 (Table 4). They expected to obtain jobs having a mean score of 57. Students in the general curriculum aspired to jobs having a mean SES index score of 44. They expected to obtain jobs having a mean score of 39. Students in the vocational curriculum aspired to jobs having a mean score of 43, but expected to obtain jobs averaging 39 on the SES scale. Academic curriculum students were significantly different than the other two groups of students on both aspirations and expectations.

An annual income over $25,000 in their chosen career (Table 4) was expected by 44 percent of the academic program students, 38 percent of the general curriculum students, and 53 percent of the vocational program students. Differences among the three groups were not statistically significant. The groups also did not differ on how sure they were of finding employment in their chosen career or the grade level at which a firm career choice was made.

The percentage of students in the three curricula planning advanced education (Table 4) were: academic, 96 percent; general, 72 percent; and vocational, 71 percent. A junior or technical college (Table 4) was the choice of 59 percent of the vocational students, 48 percent of the general students, and 28 percent of the academic students. Only about one-third of the general and vocational students planned to continue their education immediately after high school (Table 4), but 78 percent of the academic students expected to begin further education immediately.

Discussion of Results

Background Characteristics

Gender and Ethnicity

In Ohio, a greater proportion of females were in the academic curriculum than males. Males were more likely to be in the general curriculum than females. In Southwest Georgia, there was no relationship between gender and the curriculum of the students.

A large difference in ethnicity was noted between the samples used for the two studies. The rural Ohio population was nearly all white. The rural Southwest Georgia public school population was 80 percent black and the senior class was 73 percent black. Non-white students in Ohio were under-represented in the academic curriculum and over-represented in the general curriculum. The same finding held true in the Southwest Georgia study.

Parent SES and Education

The mean SES scores were higher in both studies for students in the academic curriculum than for students in the general and vocational curricula. Family SES scores were slightly higher for the Ohio rural sample of students than for the Southwest Georgia sample of students.

Little difference was noted between the two samples in the average educational level of the mothers of senior students. In Ohio, mothers of vocational curriculum students had a higher educational level than mothers of students in the general curriculum. In Southwest Georgia, mothers of general curriculum students had a higher educational level than mothers of students in the vocational curriculum.

Little difference was also noted between the educational level of the fathers of students in the academic curriculum in the two samples. Fathers of vocational program students in Southwest Georgia had a higher educational level than the comparable group in Ohio. Fathers of general program students in Ohio had a higher educational level than the comparable group in Southwest Georgia.

Parental Expectations

A much higher percentage of Southwest Georgia than Ohio students felt their parents expected them to continue their education beyond high school. Only about one-third of the Ohio students in the general and vocational curricula thought that their parents expected them to further their education. However, about 60 percent of the parents of Southwest Georgia students in general and vocational curricula expected their children to further their education. Further research is needed to determine if education is viewed more favorably in Georgia than in Ohio as a means of advancing economically. Little difference between the two samples was noted in whether parents had discussed their expectations with their children.

Aspirations

Occupational Aspirations

The academic curriculum students in both samples had the highest SES index scores for their desired and

Table 4. High School Curriculum and Aspirations of Rural Twelfth-Grade Students in Southwest Georgia (n=267)

Aspirations	Curriculum			prob.
	Academic (n=101)	General (n=89)	Vocational (n=76)	
Job Expectations				
mean	56.58	39.12[a]	38.97[a]	$p<.05$[2]
s.d	19.32	19.95	21.84	
Job Aspirations				
mean	58.34	43.71[a]	43.16[a]	$p<.05$[2]
s.d	19.81	21.94	22.14	
Income Expected				
Less than $15,000	10.0%	5.7%	12.2%	$p>.05$[1]
$15,000-$19,999	28.0%	37.5%	25.7%	
$20,000-$24,999	18.0%	19.3%	9.5%	
$25,000-$29,999	21.0%	13.6%	21.6%	
$30,000-$34,999	13.0%	14.8%	21.6%	
Over $35,000	10.0%	9.1%	9.5%	
Employment Surety				
Completely Sure	18.8%	21.3%	26.3%	$p>.05$[1]
Very Sure	59.4%	46.1%	46.1%	
Not Sure	18.8%	32.6%	27.6%	
Very Unsure	1.0%	0.0%	0.0%	
Completely Unsure	2.0%	0.0%	0.0%	
Grade Occupations Was Made				
Have Not Decided	0.0%	0.0%	0.0%	$p>.05$[1]
Prior to Sixth Grade	3.0%	2.3%	5.3%	
Seventh or Eighth	4.0%	2.3%	9.2%	
Ninth or Tenth	25.7%	23.9%	30.3%	
Eleventh or Twelfth	67.3%	71.6%	55.3%	
Plans for Advanced Education				
Definitely Will Attend	84.2%	44.9%	39.5%	$p<.05$[1]
Likely to Attend	11.9%	27.0%	31.6%	
Not Sure	3.0%	24.7%	21.1%	
Not Likely to Attend	0.0%	2.2%	5.3%	
Definitely Will Not Attend	1.0%	1.1%	2.6%	
Type of Advanced Education Planned				
Junior College	17.8%	15.7%	19.7%	$p<.05$[1]
Technical College	10.9%	22.5%	38.2%	
Four-Year University	60.4%	23.6%	5.3%	
Do Not Know	6.9%	19.1%	17.1%	
Don't Plan to Attend	4.0%	19.1%	19.7%	
When Advanced Education Would Begin				
After High School	78.2%	29.5%	31.6%	$p<.05$[1]
After Military Service	11.9%	11.4%	11.8%	
After Working Few Years	3.0%	5.7%	10.5%	
No Definite Plans	4.0%	34.1%	22.4%	
Don't Plan to Attend	3.0%	19.3%	23.7%	

Note. Test of significance: 1=chi-square 2=One-way ANOVA.
Missing cases=1.
[a]Groups do not differ significantly.

expected occupations, when compared to students in the other curricula. Students in the general and vocational curricula in both samples held similar occupational aspirations.

Income expectations were quite different for the two samples. A much higher income was expected by rural students in Southwest Georgia than students in rural Ohio. The expectations of Ohio students were probably more realistic in view of the actual salary levels of the desired occupations. Over one-half of the students in the vocational curriculum in the Georgia sample expected incomes above $25,000; only 12 percent of the students in the vocational curriculum in the Ohio sample had such expectations.

In both samples the academic curriculum students were more confident of their occupational aspirations being realized than were students in general and vocational education. Students in Southwest Georgia were more confident of achieving their occupational goals than were students in rural Ohio. Ohio students may have possessed a more realistic view of the employment marketplace than the students in rural Southwest Georgia.

Little difference was found between the two samples in the grade level at which students made their occupational choice. In both samples, the vocational curriculum students made their choice at a slightly younger age.

Educational Aspirations

The two samples were similar in that nearly all of the students in the academic curriculum planned to advance their education beyond high school. A much higher percentage of students in the general and vocational curricula in the Georgia sample, however, planned on further education. Over 71 percent of the vocational curriculum students in the Georgia sample planned on further education, but only 47 percent of the comparable group in Ohio planned to continue their education. Nearly 72 percent of the general program students in Georgia planned to go to some type of college but only 45 percent of the general curriculum students in Ohio expected to advance their education.

The junior or community college was a more popular option in Georgia than Ohio (Tables 2 and 4). The technical institute was a more popular option in Ohio than Georgia. This finding may simply reflect the availability of the two types of institutions in the two states.

The two samples were very similar in their plans for when further education would begin. About 80 percent of the academic students expected to begin further education immediately after high school, but most students in the other two curricula expected to delay continuing their education.

Recommendations

Gender and Ethnicity

In Ohio a higher percentage of females enrolled in the academic curriculum than males. A higher percentage of males enrolled in the general curriculum. Further study is warranted to discover the reasons for this phenomenon. The senior class in Southwest Georgia contained a higher percentage of females than males. Also, the percentage of non-white students in the senior class was lower than in the school as a whole. A greater proportion of non-white males, compared to non-white females and white males and females, appear to be dropping out of school prior to their senior year of enrollment. Further research is recommended to ascertain the reasons for these results so corrective action can be taken.

Non-white students in both studies appeared to be under-represented in the academic curriculum and over-represented in the general curriculum. It is recommended that rural schools in both states implement strategies to encourage non-white enrollment in the academic curriculum and provide special assistance as needed to enable the students to succeed in the program.

The disparity between the two states in the ethnic composition of the schools may result in students from both states being deprived of the opportunity to associate with students of differing cultural backgrounds. Schools should consider implementing multicultural experiences as a part of their curricula.

SES and Educational Level

These findings were consistent with prior research in that students from lower SES families tended to enroll in either vocational or general curricula and students from higher SES families tended to enroll in the academic curriculum. Researchers should investigate the sociological impact of separating students into curricula based upon SES. Schools should consider ways to encourage students from upper SES strata to enroll in some vocational education, and also ways to encourage students from lower SES strata to strengthen their education in the academic areas.

Parental Expectations

Even though Southwest Georgia parents possessed lower SES index scores than those in Ohio, they were more likely to encourage their children to pursue further education. Parents in Southwest Georgia may view education more favorably as a means of advancing economically than parents in Ohio. It is recommended that attitudes concerning education be examined further to determine reasons for the differences in findings between the two states.

Occupational Aspirations

Income aspirations for the Southwest Georgia sample appear to be unrealistically high. There appeared to be a naiveté concerning the employment marketplace. Schools should consider providing additional opportunities for students to explore career information and educational requirements for entering and advancing in various occupations.

Educational Aspirations

Nearly two-thirds of the vocational curriculum students in Southwest Georgia planned to advance their education beyond high school, but only about one-half of the comparable Ohio sample had similar intentions. Education beyond high school may be of more necessity in rural Southwest Georgia for employment in desirable occupations than in Ohio. Perhaps Ohio students are not being challenged to continue their education. The high school vocational programs may differ between the states to the extent that additional education may be viewed as more needed in order to obtain work in one state as opposed to the other. The difference might be due to the type of advanced education that is available. In Georgia, students tended to choose junior or community colleges to advance their education. In Ohio, technical institutes were more popular. Obviously, these phenomena would be fruitful areas for further study.

High School Curriculum

Educators need to consider whether specific educational programs are in the best interest of students in the United States. Should students be classifiable as academic, general, and vocational? Is academic preparation not desirable for all students? Should all students not receive some vocational education? Is general education without a purpose?

One of the first ways to make vocational and general education everyday partners is to establish instructional programs which point out to students that instruction in every class is relevant to what they are now learning and will be relevant in their lives ahead. Since we do not want to tell students an untruth, we need to make sure that all education really is relevant (Evans and Herr, 1978, p. 53).

Researchers may be able to collect and interpret data that will impact on the decisions to be made about what the high school curriculum should be like. Such research information should add rationality to the arguments of philosophers and politicians as they discuss the desirable qualities of secondary education for the 21st century.

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High School and Student Characteristics in Rural and Urban Areas of Ohio

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School managers and those who make education policy in the United States argue that small schools and districts are too costly (Howley, 1989). Their views reflect the belief that 20th-century progress causes small schools to be both inefficient and to produce poor results (p. 2). Between 1930 and 1980 the number of school districts dropped by almost 90 percent. The total number of schools in the United States decreased 65 percent. The decline took place as the population grew by 70 percent (Guthrie, 1979).

School Size and Location

Conclusions from studies on relationships between school and district size, pupil achievement and cost have taken a dramatic turn in recent years. From the beginning of this century through the 1960s, the overwhelming evidence seemed to support large schools and school districts in terms of economies, program quality, and caliber of staff. As research designs began to take into account total cost and socioeconomic status of pupils, and to include additional criteria such as achievement, pupil self-image, and success in college, economies of scale evaporated at relatively low numbers of pupils, and the disadvantages of large size become readily apparent. The current interest in "effective schools" has highlighted the importance of school climate and school culture in affecting pupil achievement (Swanson, 1988, p. 1).

Goodlad (1984) observed that most of the schools clustering in the top group on major characteristics were small, compared with the schools clustering near the bottom. It was concluded that, while it was not impossible to have a good large school, it was more difficult. Recent research would lead one to the conclusion that schools still tend to reinforce the influence of student background (Anyon, 1987; Wilcox, 1982). Schools may be a place where the inequality inherent in a capitalist economic order does battle with democratic tendencies that assert all children's right to learn (Howley, 1989).

Barker (1985) claimed that many problems such as finances, shortage of teachers, changing social values, and special interest groups were magnified in small high schools, yet, due to smaller size, they offered the best opportunities to create a school climate conducive to the best teaching and learning.

Howley (1989) synthesized achievement advantages of small scale schools as possibly due to: small class size; good student affect; strong financial support, relative to SES; productive use of available financial resources relative to SES—particularly for the improvement of curriculum and instruction; and productive cooperation of students, staff, and community (pp. 7-8). Swanson (1988) concluded that at the senior high school level, assuming the availability of regional centers, there appeared to be some agreement on a minimum size of 400 to 600 students. A minimum district size of between 1300 and 1900 pupils was recommended for a complete K-12 program.

Aspirations

Students develop educational and occupational plans that build upon their backgrounds of experiences (Odell, 1988). The life experiences of secondary students have been determined in part by the families of which they are members, the communities in which they live, and the schools that they attend. These life experiences manifest themselves in the educational and occupational expectations of students (p. 17).

Rural or urban residence has been shown to be related to the educational and occupational aspirations of youth (Moore, Baum, and Glasgow, 1984; Cosby and Picou, 1973). Peterson (1978) found that adolescents from large urban communities thought more highly about themselves than did adolescents from rural communities. However, similarities were found between rural and inner-city youth with both having lower self esteem than other urban and suburban youth. Jyung and Miller (1990) reported no relationship between either educational or vocational aspiration and location; however, Barcinas (1989) concluded that urban students have higher educational and occupational aspirations than rural students.

Problem

Research has been somewhat consistent in reporting a relationship between location (rural or urban) and aspirations. Educational and occupational aspirations may be viewed as two different constructs. Several variables might be used to obtain a more complete measure

of each construct. For the purposes of this study, level of job expectations, level of job aspirations, expected income, surety of employment, age of occupational choice, and military service plans were considered to be measures of occupational aspirations. Plans for advanced education, type of advanced education planned, and when advanced education would begin were considered to be measures of educational aspirations. The major purpose of this research was to describe the relationships between school location (urban vs. rural) and students' occupational and educational aspirations. A secondary purpose was to explore the relationships between student background factors and location of school.

Objectives

The studies were conducted to answer the following research questions:

1. Is location of school (rural or urban) related to class size, enrollment, size of staff, number of curricular and extra-curricular offerings, and per-pupil expenditure?
2. Is location of school related to gender, ethnic background, socioeconomic status, education level of parents, parental expectation for student to pursue advanced education, parental discussions with students about advanced education, and grade point average?
3. Is location of school related to job expectations, job aspirations, expected income, surety of employment, and grade level at which occupational choice was made?
4. Is location of school related to plans for advanced education, type of advanced education planned, and when advanced education would begin?

Methods and Data Source

Data Source

The definition of rural schools used in Ohio was that they were located in counties with less than 40,000 population and outside a Standard Metropolitan Statistical Area. Also, the average enrollment per grade level at the secondary level was not to exceed 125 students. A total of 71 rural high schools were in the frame. Cluster sampling was used. Ten schools were randomly drawn. All schools agreed to participate. The sample consisted of all of the seniors in the high school class of 1989.

The definition of urban schools was that they were located in counties with more than 200,000 population and inside a Standard Metropolitan Statistical Area. The average enrollment per grade level at the secondary level was to exceed 300 students. One hundred fourteen urban public high schools met the identified criteria. A sample of 10 schools and 10 alternates was drawn randomly. However, since only five of the 20 agreed to participate, the urban sample should be regarded as an accessible rather than random sample. Three of the participating urban schools would be considered to be urban and two suburban. The urban sample consisted of one-half of the seniors in the class of 1989 in the participating schools. Schools in both samples were geographically distributed throughout the state of Ohio.

School principals also completed a questionnaire to provide descriptive information about the school. Responses were obtained from all 15 of the principals in the sample.

Instrumentation

The questionnaire was adapted from the work of Odell (1986). Content validity was established by a panel of experts consisting of university faculty members, school administrators, and former high school teachers. Pilot testing for suitability and reliability was conducted with students in schools not included in the sample. The test-retest reliability coefficient for the student questionnaire was .84. The test-retest reliability of the administrator questionnaire was .91.

The academic records of the students were used to obtain grade point averages. Grade point averages were verified by the school principals.

Data Collection

Data were collected during the months of March through May 1989. An introductory letter was mailed to each principal in the schools which had agreed to participate. A telephone call was then made to discuss the study, data collection procedures, instruments, and the principal's questions. A second telephone call was used to schedule a personal visit with a designated contact person. The personal visit was made by the researcher to deliver the questionnaires, provide parental permission forms, give instructions for recording student grade point averages and leave a mailing package for the return of the completed instruments. A total of 529 of the 767 Ohio rural senior students from the 10 schools provided signed parental permission forms and completed the questionnaires for a 69 percent response rate. A total of 718 of 834 urban students from the five schools provided signed parental permission forms and completed the questionnaires for an 86 percent response rate. All of the principals in the 15 schools responded to the administrator questionnaire.

Control of Errors

A number of errors normally associated with descriptive survey research were considered. Content

validity and test-retest reliability were established to control measurement error. Sampling error can result when a sample is not representative of the population. Random selection of the rural schools and use of the population of senior high school students from each of the schools yielded a 95 percent probability of sampling estimates within plus or minus 3.5 percent of the population values for the rural sample. Sampling error could not be calculated for the urban sample because it had to be considered as accessible rather than random. Frame and selection errors were controlled through use of a published directory of schools and use of all senior students on the class lists of the selected schools. All schools in the frame had an equal probability of being selected. The chief source of error was nonresponse error. Because of the need to secure parental permission forms, a higher rate could not be obtained within the resources allocated to the project. The reader should be cautioned that some bias in findings may result because 31 percent of the rural sample and 14 percent of the urban sample failed to respond, and because only five of 20 urban schools agreed to participate.

Data Analysis

Data were described using frequencies, percentages, means, and standard deviations. One-way analysis of variance with post-hoc analysis on interval data and chi-square on nominal data were used to discover significant differences between urban and rural schools on some variables and between urban and rural students on other variables.

Results

Characteristics of Schools

Data reporting characteristics of schools are in Table 1. In rural schools the senior class of 1989 averaged 74 students. In urban schools the average was 333 students. The four-year high school enrollment averaged 309 for rural schools and 1368 for urban schools. Rural high schools had an average of 24 teachers, no teacher aides, three certified support staff, and one administrator. Urban schools had an average of 79 teachers, two teacher aides, 13 certified support staff, and five administrators. Rural schools listed a mean of 84 curricular offerings and 23 extra-curricular offerings. Urban schools listed a mean of 221 curricular offerings and 41 extra-curricular offerings. Per-pupil expenditures averaged $2657 in rural schools and $3527 in urban schools.

Background Characteristics of Students

Background characteristics of students in rural and urban schools are reported in Table 2. No difference between rural and urban students in gender was found. Students from the two populations differed significantly in ethnic background. The rural population was 94 percent white; the urban population was 72 percent white.

The high school curriculum of rural and urban students differed significantly. Fewer urban students (9 percent), compared to rural students (23 percent), were in the general curriculum. A higher percentage of urban students were in the vocational (27 percent) and academic (64 percent) curricula than rural students (19 percent and 58 percent, respectively). Rural students (2.64) had slightly higher grade point averages than urban students (2.54). There was no difference between the two populations in the mean number of extra-curricular activities in which they participated.

The occupations reported for fathers and mothers were assigned a socioeconomic status (SES) index level developed by Stevens and Cho (1985). Values from zero (low status) through 96 (high status) were assigned to occupations. The mean SES scores for rural students was 30.8. It was 45.0 for urban students. The number of siblings was greater for rural students (2.8) than urban students (2.1).

Sixty-five percent of the rural students had fathers with less than

Table 1. Characteristics of Rural and Urban Secondary Schools in Ohio

	School Location				
	Rural		Urban		Probability
Variables	mean	s.d.	mean	s.d.	(t-test)
School Size					
Senior Class Size	74	22.3	333	116.6	$p<.05$
Total Enrollment	309	76.2	1368	443.0	$p<.05$
School Staff					
Teachers	24	3.7	79	10.9	$p<.05$
Teacher Aides	0.3	0.5	2	2.1	$p<.05$
Certified Support	3	1.7	13	15.5	$p<.05$
Administrators	1	0.5	5	1.2	$p<.05$
Curricular Offerings	84	20.8	221	44.5	$p<.05$
Extra-curricular Offerings	23	10.2	41	7.8	$p<.05$
Per Pupil Expenditures	$2657	379.4	$3527	522.8	$p<.05$

Table 2. Personal Background Characteristics of Rural and Urban Twelfth-Grade Students in Ohio

Variables	School Location		
	Rural	Urban	Probability
Gender			
Female	51.0%	50.8%	$p > .05^1$
Male	49.0%	49.2%	
Ethnic Background			
White	94.1%	72.1%	$p < .05^1$
Non-White	5.9%	27.9%	
Curriculum			
Academic	58.0%	64.5%	$p < .05^1$
General	22.9%	8.8%	
Vocational	19.1%	26.7%	
Grade Point Average	2.64	2.54	$p < .05^2$
Extra-Curricular Activities			
mean	3.6	3.7	$p > .05^2$
s.d.	2.2	2.4	$p < .05^2$
Socioeconomic Status		45.0	
mean	30.8	21.8	$p < .05^2$
s.d.	18.0		
Number of Siblings			
mean	2.8	2.1	$p < .05^2$
s.d.	2.3	1.7	
Fathers' Educational Attainment			
Less than high school	13.7%	4.9%	$p < .05^1$
High school	51.3%	31.4%	
Bus./technical school	8.8%	8.1%	
Junior college	5.9%	7.7%	
Four-year college	9.5%	20.1%	
Advanced degree	4.0%	17.2%	
Mothers' Educational Attainment			
Less than high school	7.1%	4.2%	$p < .05^1$
High school	58.3%	40.4%	
Bus./technical school	11.1%	10.1%	
Junior college	5.5%	10.1%	
Four-year college	8.4%	20.9%	
Advanced degree	2.9%	9.0%	
Parental Discussions			
Discussed plans	94.1%	97.6%	$p < .05^1$
No discussions	5.9%	2.4%	
Parental Expectations			
Yes	60.8%	74.3%	$p < .05^1$
No	22.7%	15.4%	
Not sure	16.5%	10.3%	

Note. Test of Significance: 1=Chi-square; 2=t-test. Alpha level=.05.

a high school education or only a high school education. In contrast, 53 percent of the urban students had fathers with more than a high school education. Similar results were obtained for mothers; 65 percent of the rural mothers had less than or only a high school education and 50 percent of the urban mothers had more than a high school education.

Nearly all (above 94 percent) of the students in both populations had discussed their future educational plans with their parents. Rural students' parents (61 percent) were less likely to expect their children to further their education beyond high school than were urban parents (74 percent).

Aspirations

Aspirations of the students in the study are reported in Table 3. Eighty-four percent of the urban students and 74 percent of the rural students planned to advance their education beyond high school. Students planning to further their study beyond high school listed the area they planned to pursue. Rural students were more likely than urban students to pursue advanced study in the areas of agriculture, education, and the health sciences. Urban students were more likely than rural students to pursue study in the areas of the arts, sciences, social sciences, and business. A higher percentage of urban students (65 percent) than rural students (47 percent) planned to attend a four-year college. Rural students (30 percent) were more likely than urban students (15 percent) to attend a technical college. Only slight differences were noted between the two groups in when their advanced education would begin.

SES index scores (Stevens and Cho, 1985) were used to compare students from the two environments on their occupational choices. Two variables were measured. The first, idealistic occupation, was the variable describing the occupation students desired to enter. The second, realistic occupation, was the variable describing the occupation the students expected to enter. There was a significant, but small difference between rural and urban students in the SES index score of their idealistic and realistic occupational choices. The SES index scores were higher for the idealistic choice than for the realistic choice for both groups. Rural students selected idealistic occupations averaging a SES score of 58, compared to scores for urban students of 61. Realistic occupational choices for rural students averaged 54. Realistic occupational choices for urban students averaged 57.

Income expectations of the two groups differed. Only about one-fourth (27 percent) of the rural students expected incomes above $25,000, but 39 percent of the urban students expected incomes above $25,000. There was no difference between the two groups in their confidence that they could find employment in their expected occupation. About 63 percent of the students were sure of finding their expected employment. The two groups also did not differ in the time at which they made their occupational choice. The majority of students appeared to have made their selection in the 11th or 12th grade. There was also no difference between the two groups in their military service plans. About 10 percent of the urban students and 11 percent of the rural students indicated that they planned to enter the military service.

Discussion of Results

School Characteristics

As expected, large differences were found between urban and rural school characteristics. Urban schools were larger; had more teachers, administrators, and support staff; and offered more courses and extra-curricular activities. They were also more costly to operate on a per-pupil expenditure basis.

These findings related to total expenditures per pupil appear to be consistent with the findings of Swanson (1988). In that study, it was found that expenditures per pupil declined as district size increased to about 3,000 pupils. Between 3,000 and 4,000 pupils there were no changes in the expenditures examined; above 4,000 pupils, per pupil expenditures began to increase with size. However, Swanson also found that this curvilinear relationship could be explained equally well by district full valuation per pupil and district socioeconomic characteristics (p.4).

Even though there were more extra-curricular offerings in large schools than in small schools, the average participation was the same in both rural and urban settings. Each student, whether in a urban and rural setting, participated in about 3.5 extracurricular activities.

It was interesting to note that one administrator was responsible for a rural high school enrollment of 309 students, but five administrators were used with an urban high school enrollment of 1368. The larger setting appeared to offer no advantage in administrative efficiency.

The difference in curricular offerings between rural and urban schools may be partially explainable by the fact that vocational education programs were a part of the curricular offerings of the urban schools; however, students in rural schools who desired vocational education programs generally needed to enroll in a joint vocational school, a cooperative venture among several rural school districts.

Student Background Characteristics

Students from the two populations were quite different in ethnicity.

Table 3. Educational and Occupational Aspirations of Rural and Urban Twelfth Grade Students in Ohio

Variables	School Location		
	Rural	Urban	Probability
Plans for Advanced Education			
Will attend college	73.5%	84.3%	$p<.05$[1]
Will not attend college	11.3%	6.0%	
Not sure	15.1%	9.7%	
Area of Study			
Agriculture	3.1%	0.7%	$p<.05$[1]
Arts	5.4%	7.9%	
Sciences	4.4%	8.5%	
Humanities	2.3%	2.1%	
Mathematics	3.3%	4.1%	
Social Sciences	3.3%	7.3%	
Education	9.2%	6.5%	
Engineering	12.1%	10.3%	
Health Sciences	13.1%	6.9%	
Business	34.7%	41.5%	
Type of Planned Advanced Education			
Four-year college	47.2%	65.1%	$p<.05$[1]
Technical college	29.7%	15.4%	
Junior college	5.1%	7.1%	
Do not know	10.8%	8.8%	
Don't plan to attend	7.2%	3.5%	
When Advanced Education Would Begin			
After high school	61.6%	69.5%	$p<.05$[1]
After military service	5.9%	4.6%	
After working a few years	10.4%	9.[illegible]%	
No definite plans	15.5%	12.7%	
Don't plan to attend	6.6%	3.6%	
Idealistic Occupation			
mean	58.0	60.7	$p<.05$[2]
s.d.	20.5	20.0	
Realistic Occupation			
mean	54.0	57.3	$p<.05$[2]
s.d.	21.3	21.1	
Expected Income			
less than $15,000	14.7%	10.2%	$p<.05$[2]
15,000-19,999	30.9%	24.9%	
20,000-24,999	27.1%	25.8%	
25,000-29,999	13.2%	17.8%	
30,000-34,999	8.2%	9.6%	
Over $35,000	5.9%	11.7%	
Surety of Employment			
Sure	63.0%	63.6%	$p>.05$[1]
Unsure	37.1%	36.4%	
Time When Occupational Choice Was Made			
Have not decided	5.5%	5.6%	$p>.05$[1]
Prior to sixth grade	3.6%	6.1%	
Seventh or eighth grade	6.3%	7.0%	
Ninth or tenth grade	23.3%	26.0%	
Eleventh or twelfth grade	61.3%	55.3%	
Military Service Plan			
Will enter	11.4%	9.6%	$p>.05$[1]
Will not enter	78.7%	83.1%	
Not sure	9.8%	7.3%	

Note. Test of Significance: 1=Chi-square; 2=t-test. Alpha level=.05.

The rural students appeared to be quite homogeneous, however the urban students seemed to have a greater mix of race and cultures. The lack of opportunity of rural students to interact with persons of varying backgrounds may be a limiting factor in their educational and sociological development.

The high school curricula in the urban schools in the sample emphasized either academic education or vocational education. Few students were in what might be called a general curriculum. However, one-fourth of the students in the rural schools were enrolled in the general curriculum. One reason for this is that rural students often had to leave their home school to participate in vocational education. Therefore, students may have seen the general curriculum as a better alternative to the academic curriculum, since it could be obtained at the home school.

SES scores were much lower for families in rural areas than for families in urban areas. Families were larger in rural areas. The educational level of the parents was higher in urban areas than in rural areas. Urban parents were more likely to expect their children to advance their education beyond high school. All of these factors are reflective of the differences in social context between rural and urban areas. These differences in social context of the two locations help to explain differences in aspirations of students.

Educational Aspirations of Students

Most students planned to advance their education beyond high school. Rural students and urban students differed some in the areas they planned to pursue. They seemed to choose areas they had been able to observe or experience. The four-year college was a more popular choice for urban students than for rural students; however, rural students were more likely to attend technical institutes than urban students. This difference may be due partially to the fact that technical institutes may be more available geographically than four-year universities in rural areas.

Occupational Aspirations of Students

Students from urban and rural areas differed little in their levels of occupational aspirations. Students from rural areas will need to leave their communities to fulfill their occupational aspirations. Jobs with high SES scores simply are not available in sufficient quantity in rural areas to satisfy the expectations of rural students. Rural communities will continue to export their brightest and most capable youth. This will further compound the problems faced by many of these communities.

Students in rural areas have lower income expectations than students in urban areas. This may be due to the differences in pay scale for average workers in the two locations. Rural students do not observe as many high-income workers as urban students.

Recommendations

The expected differences were found between rural and urban areas in school characteristics. Further research is warranted on the issue of optimum school size for both rural and urban settings.

Rural and urban cultures appear to be somewhat different. Rural students tend to be more homogeneous than urban students. It is recommended that schools develop ways to provide cultural interchange between rural and urban schools and students. Students from urban areas should learn what it is like to live and work in a rural area. Students from rural areas should learn what it is like to live and work in an urban area. Some teacher certification programs require an urban teaching experience for certification. The rural culture is different from the urban one. States should consider whether it might also be wise to require a rural teaching experience for certification.

Parents of rural students were less likely to expect their children to advance their education. Rural schools should consider ways to assist parents and students as they consider the options for advanced education.

Vocational education appeared to be less available to rural students than to urban students. While vocational education was offered in rural areas by joint vocational schools, enrollment in such schools required the students to forsake attendance at their home school. Ways should be explored to allow students to take programs at the joint vocational school and also take academic subjects at the home school. Rural communities should develop ways to challenge their brightest students to return to rural areas. These individuals can provide the expertise needed to develop rural communities, even in the face of societal pressures that encourage urban development at the expense of rural development.

It appears that there are disadvantages to being either very large or very small. The challenge is to provide stimulating learning environments with broad educational programs characteristic of large urban schools along with the supportive social structure characteristic of small rural schools.

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Community and School Characteristics and Voter Behavior in Ohio Rural School District Property Tax Elections

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A trend in public school finance is that financial support from the federal government has decreased (Newman and Bull, 1986) and a greater financial burden is having to be assumed at both the state and local levels. Local support is determined primarily through property tax issues which must be approved by local voters.

Anne Campbell (1985), former Nebraska Commissioner of Education, suggested that although there is a need for increased state and federal understanding of the unique problems associated with rural education, rural community members must be willing to invest in the future of their own children. Terrel H. Bell (1988) identified a major problem in public school finance when he disclosed that those who operate capital-intense businesses (such as farmers) bear an excessive burden in financing schools.

Piele and Hall (1973), indicated that student socioeconomic characteristics, average community income, and community educational attainment are indicators of socioeconomic status. These same researchers disclosed that individuals who have benefitted most from education were more likely to support educational financial issues. Community members of higher socioeconomic status were found to be predisposed to support school related property tax issues.

Important school factors influencing voter behavior include student advanced educational and occupational patterns after completing high school and athletic program history. Cutlip and Center (1964) contended that student success is the most important factor in school-community relations.

In 1960, Carter and Sutthoff found that informed school observers perceived student athletics as an important aspect of public schools. Relatedly, Nunnery and Kimbrough (1971) conducted a study for the purpose of determining voter support for school referendums and found that attempts to improve extracurricular programs drew significant voter support. Gjelten and Nachtigal (1979) suggested that student participation in extracurricular activities in rural schools was an integral part of the complete school program. These same researchers reported that the role of athletic competition increased linkages between community and schools, as a result of limited opportunities for public entertainment in rural areas.

There has been little voter behavior research conducted on rural school districts in Ohio. What community and school characteristics influence Ohio rural community members? In an effort to seek the answer to this question, a study was conducted in Ohio with the major purpose of exploring relationships between the percentage of successful property tax issues and community and school characteristics. The following specific objectives guided the study:

(1) Describe rural school districts in Ohio in terms of: (a) the percentage of successful property tax issues, (b) the percentage of Aid to Dependent Children (ADC) students, (c) average household income, (d) community educational attainment, (e) financial issue history, (f) advanced educational and occupational patterns of former rural students, and (g) high school athletic history.
(2) Explore relationships between the percentage of successful property tax issues and: (a) the percentage of ADC students, (b) average community income, (c) community educational attainment, (d) financial issue history, (e) advanced educational and occupational patterns of former rural students, and (f) high school athletic history.
(3) Determine the characteristics which best predict election success in rural school district property tax elections.

Methods

The study was descriptive and correlational in nature. The population consisted of all rural school districts in Ohio (N=74). Rural school districts were defined as: (1) being located outside of a Standard Metropolitan Statistical Area, (2) having a secondary enrollment of 500 students or less, and (3) being located in a county with a total population under 40,000. Data were

Table 1. Percentage of Successful Financial Issues

Percent of Successful Issues	n	Percent
0 - 9	5	6.7
10 - 19	5	6.7
20 - 29	3	4.1
30 - 39	5	6.7
40 - 49	4	5.5
50 - 59	9	12.2
60 - 69	10	13.5
70 - 79	9	12.2
80 - 89	10	13.5
90 - 100	14	18.9
Total	74	100.0

Mean=61.2; SD=30.0

Table 2. Percentage of ADC Students

Percent of Students	n	Percent of Districts
0 - 9	52	70.2
10 - 19	15	20.3
20 - 29	6	8.1
30 - 39	1	1.4
Total	74	100.0

Mean=8.62, SD=7.1

Table 3. Average Household Income Per District

Dollar Income	n	Percent
$19,999 or less	25	33.7
$20,000 - $20,999	20	27.0
$21,000 - $21,999	11	14.9
$22,000 - $22,999	12	16.2
$23,000 - $23,999	4	5.4
$24,000 - $24,999	1	1.4
$25,000 - $25,999	0	0.0
$26,000 - $26,999	1	1.4
Total	74	100.0

Mean=20,532.0, SD=1,932.8

collected from a variety of sources including: (1) the Ohio Department of Education (ODE), (2) the U. S. Census Bureau, and (3) an investigator-designed high school athletic history questionnaire administered to rural high school principals. Data were obtained for five school years between 1984 and 1988, except for U.S. Census data on community educational attainment.

Content and face validity of the instrument were established by a panel of experts and a field test conducted in eight small districts not included in the population of the study. In an attempt to determine the accuracy of information provided on the questionnaire, a number of questions were included corresponding to information available from the ODE. Very strong associations (Davis, 1971) were found between respondent answers and information from ODE.

A complete data set was obtained for all variables except high school athletic history. Twenty rural principals refused to complete and return the questionnaire. Nonresponse error was controlled by comparing respondents to nonrespondents on the dependent variable (percentage of successful property tax elections). A t-test between the two groups indicated no significant difference existed ($t=.21$, $p=.83$).

Results

The dependent variable in the study was the percentage of successful property tax issues. Data were weighted for analysis purposes. A two-thirds weight was assigned to successful issues between 1984 and 1988. A one-third weight was assigned to successful issues between 1973 and 1983. In seven districts, success of issues between 1973 and 1983 were used exclusively as a measure of the dependent variable. Figures contained in Table 1 show that rural community members supported 61.2 percent of all issues.

The Ohio Department of Human Services reports to school districts the names of those families who receive assistance from the federal government based upon family income. Students belonging to such families are categorized as ADC students. Based upon current law, districts which have higher percentages of ADC students receive additional state revenue by way of the foundation program. Table 2 reveals that of total rural school enrollment, 8.6 percent were ADC students. Based upon income tax returns, the average household income per rural district was $20,532 (Table 3). There was a difference of $11,435 between the wealthiest district and poorest district, with the range between $14,621 and $26,056.

About 63 percent of rural community members attained at least 12 years of formal education (Table 4). Table 5 presents data pertaining to the type of election when various school financial issues were held. Approximately 41 percent (n=94) of the issues between 1984 and 1988 were conducted during primary elections, 49 percent (n=113) were conducted during general elections, and 10 percent (n=24) were conducted as special elections. Each Ohio rural district averaged 1.3 issues during primary elections, 1.5 issues during general elections, and 0.3 issues during special elections.

Emergency new and renewal issues were operational issues with a life of five or fewer years. After the passage of such issues, the board of education had the option of issuing anticipation notes for one-half of the revenue expected for the first year. This allowed for almost immediate financial relief of operational related expenses. Limited issues provided operational or capital funding for joint vocational schools.

Bond issues provided funding for long-term capital finance (such as for the construction of buildings), and permanent improvement issues provided funding for the maintenance or improvement of capital facilities. Continuous issues provided operational funding for an indefinite period of time.

An inspection of Tables 6 and 7 reveals information regarding the six types of financial issues conducted in rural Ohio districts. The following percentages of differing types of issues were discovered: (1) emergency new, 22.4 percent (n=51), (2) continuous, 15.4 percent (n=35), (3) limited, 11.5 percent (n=26), (4) bond, 18.5 percent (n=42), (5) permanent improvement, 26.0 percent (n=59), and (6) emergency renewal, 6.2 percent (n=14).

Almost one-third (33.6 percent) of former Ohio rural students immediately entered an occupation, about one-third (30.2 percent) entered a bachelor's degree program, and the final one-third (36.2 percent) either entered an associate's degree program, technical program, military service, or could not be accounted for by school administrators (Tables 8 and 9).

The average rural school district in Ohio won 30.2 percent of its boys varsity football games, 49.4 percent of its girls varsity basketball games, 48.9 percent of its boys varsity basketball games, and 49.7 percent of its boys varsity baseball games (Tables 10 and 11).

Exploration of Relationships Between the Percentage of Successful Property Tax Issues and Selected Community and School Characteristics

Table 12 reveals that negative moderate associations were discovered between the percentage of successful property tax issues and: (1) the percentage of ADC students (rho=−.49), (2) percentage of special elections (rho=−.31), (3) percentage of bond issues (rho=−.30), and (4) the percentage of students whose status was unknown after high school (rho=−.35). As each of these four independent variables increased, voter support for property tax issues decreased.

Positive moderate relationships were found between the dependent variable and: (1) average community income (rho=.32), and (2) the percentage of community members with 12 or more years of formal education (rho=.32). As community income and educational

Table 4. Percentages of Community Members with Twelve or More Years of Education

Percentage Range	n	Percent
40.0 - 49.9	3	4.1
50.0 - 59.9	13	17.6
60.0 - 69.9	52	70.1
70.0 - 79.9	5	6.8
80.0 - 89.9	1	1.4
Total	74	100.0

Mean=62.8, SD=6.4

Table 5. Type of Election

	Primary			General			Special		
Election Frequency	Dist. No.	Election No.	%	Dist. No.	Election No.	%	Dist. No.	Election No.	%
0	16	0	21.6	13	0	17.6	54	0	73.0
1	32	32	43.2	29	29	39.2	16	16	21.6
2	17	34	23.0	18	36	24.3	4	8	5.4
3	8	24	10.8	10	30	13.5	0	0	0.0
4	1	4	1.4	2	8	2.7	0	0	0.0
5	0	0	0.0	2	10	2.7	0	0	0.0
Totals	74	94	100.0	74	113	100.0	74	24	100.0

Mean=1.3, SD=1.0; Mean=1.5, SD=1.2; Mean=0.3, SD=0.6

Table 6. Percentages of Emergency New, Continuous, and Limited Elections

	Primary			General			Special		
Election Frequency	Dist. No.	Election No.	%	Dist. No.	Election No.	%	Dist. No.	Election No.	%
0	47	0	63.5	50	0	67.5	58	0	78.3
1	14	14	18.8	17	17	23.0	9	9	12.2
2	7	14	9.5	4	8	5.4	4	8	5.4
3	2	6	2.7	2	6	2.7	3	9	4.1
4	3	12	4.1	1	4	1.4	0	0	0.0
5	1	5	1.4	0	0	0.0	0	0	0.0
Totals	74	51	100.0	74	35	100.0	74	26	100.0

Mean=0.7, SD=1.2; Mean=0.5, SD=0.8; Mean=0.4, SD=0.8

attainment increased, voter support for property tax issues also increased.

Prediction of Election Success

Twenty-two independent variables were entered into a step-wise multiple regression equation to determine the best predictors of election success (Table 13). The following five variables (listed in order of importance) accounted for about 53 percent of the variance in predicting election success: (1) percentage of ADC students, (2) percentage of bond issues, (3) percentage of continuous issues, (4) percentage of games won in boys varsity basketball, and (5) percentage of special elections. All variables were negatively related to election success.

Discussion of Findings

In this section, findings will be compared or contrasted with previous research. For most variables, comparative research was conducted in differing time periods and/or differing populations. Therefore, caution must be exhibited in drawing absolute conclusions.

Rural community members in Ohio supported 61.2 percent of all property tax issues. Although this variable was weighted, the success rate experienced in rural Ohio school districts is believed to be reflective of those rates which rural school districts in Ohio experience each year. Piele and Hall (1973) reported that past voting patterns were significant indicators of present voting patterns.

According to Carmen (1988), only 21.4 percent of all Ohio school related issues were successful during a general election conducted in 1988. It appears that rural residents are more supportive of their schools than Ohio residents as a whole.

Almost 9 percent of rural students between 1984 and 1988 were ADC students. According to the ODE for 1988 only, 15.85 percent of all school students in Ohio were ADC students. Rural school districts tend to have fewer ADC students than the statewide average.

The average personal income in rural Ohio districts was $20,532. The average personal income for all Ohio districts in 1988 was $25,518. Rural Ohio community members tend to have less personal income than the average Ohio resident.

In terms of educational attainment of community members, 63 percent of the rural residents had completed at least 12 years of formal education, compared with 64.6 percent of all Ohio residents. Rural Ohio community members are only slightly less educated than the average Ohio resident.

Of the 231 school district financial issues conducted between 1984 and 1988, 41 percent were conducted during general elections, 48.9 percent were conducted during primary elections, and 10.4 percent were conducted as special elections. Approximately 90 percent of the elections were conducted during primary and general elections. School districts are not responsible for financing elections when issues are conducted during primary and general elections.

Almost 45 percent of the financial elections were capital related (being either bond or permanent improvement). This might reflect a need for alternative capital finance options for Ohio rural school districts.

Student follow-up information provided by ODE revealed the following: (1) 33.6 percent immediately entered an occupation, (2) 30.2 percent entered a bachelor's degree program, (3) 15.7 percent entered an associate's degree program, (4) 3.9 percent entered a technical program, (5) 6.4 percent entered the military, and (6) 10.2 percent were accountable for by school officials.

Barcinas (1989) examined rural seniors in Ohio and reported that 47.2 percent expected to enter a bachelor's degree program, 5.1 percent expected to enroll in a community or junior college, and 29.7 percent expected to enter a technical degree program.

Based upon these two data sets, more rural students planned on entering a bachelor's degree program than

Table 7. Percentages of Bond, Capital Permanent Improvement, and Emergency Renewal Issues

	Bond			Capital Permanent Improvement			Emergency Renewal		
Election Frequency	Dist. No.	Election No.	%	Dist. No.	Election No.	%	Dist. No.	Election No.	%
0	47	0	63.4	38	0	51.3	63	0	85.1
1	17	15	23.0	21	21	28.3	8	8	10.8
2	4	8	5.4	11	22	14.9	3	6	4.1
3	4	10	5.4	3	9	4.1	0	0	0.0
4	1	4	1.4	0	0	0.0	0	0	0.0
5	1	5	1.4	0	0	0.0	0	0	0.0
6	0	0	0.0	0	0	0.0	0	0	0.0
7	0	0	0.0	1	7	1.4	0	0	0.0
Totals	74	42	100.0	74	59	100.0	74	14	100.0

Mean=0.6, SD=1.1; Mean=0.8, SD=1.1; Mean=0.2, SD=0.5

actually enter such programs, fewer students planned on enrolling in a junior college than actually enter a junior college, and more students planned on entering a technical program than actually do enter such programs.

Barcinas also reported that 5.9 percent of Ohio rural high school seniors planned upon entering the military. The percentage of Ohio rural students planning to enter the military is reflective of the percentage who actually do enter the military.

A moderate negative relationship (rho=−.49) was discovered between the dependent variable and the percentage of ADC students. Boskoff and Zeigler (1964) and Minar (1966) disclosed that as student socioeconomic background increased,

Table 8. Advanced Educational Status of Rural Students

Percentage of Former Students	Associate Degree		Bachelor's Degree		Technical Degree	
	n	Percent	n	Percent	n	Percent
0.0	1	1.4	1	1.4	23	31.1
0.1 - 9.9	21	28.3	0	0.0	40	54.0
10.0 - 19.9	32	43.1	10	13.5	8	10.8
20.0 - 29.9	13	17.6	22	29.7	0	0.0
30.0 - 39.9	3	4.1	22	29.7	0	0.0
40.0 - 49.9	0	0.0	15	20.2	0	0.0
50.0 - 59.9	0	0.0	1	1.4	0	0.0
60.0 - 69.9	0	0.0	0	0.0	0	0.0
70.0 - 79.9	0	0.0	0	0.0	0	0.0
80.0 - 89.9	0	0.0	0	0.0	0	0.0
90.0 - 100.0	1	1.4	0	0.0	0	0.0
Data Not Available	3	4.1	3	4.1	3	4.1
Totals	74	100.0	74	100.0	74	100.0

Mean=15.7 30.2 3.9
SD=12.6 10.2 4.3

Table 9. Occupational Status of Rural Students

Percentage of Former Students	Military		Employed		Unaccounted	
	n	Percent	n	Percent	n	Percent
0.0	5	6.8	1	1.4	19	25.7
0.1 - 9.9	53	71.5	0	0.0	21	28.3
10.0 - 19.9	12	16.2	8	10.8	20	27.0
20.0 - 29.9	1	1.4	18	24.3	7	9.5
30.0 - 39.9	0	0.0	24	32.3	2	2.7
40.0 - 49.9	0	0.0	12	16.2	2	2.7
50.0 - 59.9	0	0.0	7	9.5	0	0.0
60.0 - 69.9	0	0.0	1	1.4	0	0.0
70.0 - 79.9	0	0.0	0	0.0	0	0.0
80.0 - 89.9	0	0.0	0	0.0	0	0.0
90.0 - 100.0	0	0.0	0	0.0	0	0.0
Data Not Available	3	4.1	3	4.1	3	4.1
Totals	74	100.0	74	100.0	74	100.0

Mean=6.4 33.6 10.2
SD=4.0 12.3 10.9

community support for school financial issues also increased.

A moderate positive association (rho=.32) was found among the dependent variable and average community income. Previous researchers have also found that average community income significantly influences election success (Boskoff and Zeigler, 1964; Milstein and Jennings, 1970; Smith, 1968; and Davidson, 1967).

Community educational attainment was also found to be important in terms of voter support for school financial issues (rho=.32). As community educational attainment increased, so did voter support. This finding was supported by a number of other researchers (McKelvey, 1966; Tebbutt, 1968; Schoonhoven and Patterson, 1966; Wilson and Banfield, 1971).

School financial issues conducted as special elections tended to be less successful (rho=−.31). Voter turnout is typically lower in special elections than in primary or general elections. Piele (1983) indicated that a modification in voter behavior theory occurred in the 1970s and early 1980s. Prior to this time, there was a great deal of empirical evidence to support the theory that the lower the voter turnout, the greater the likelihood that a school financial issue would be supported (Carter and Sutthoff, 1960; Agger and Goldstein, 1971; Piele and Hall, 1973). Researchers began to observe that lower voter turnout did not necessarily insure a successful financial election (Rubinfeld and Thomas, 1980).

Bond issues (rho=−.30) received less voter support than other types of financial issues. This finding was not supported by other researchers (Minar, 1966; Carter and Savard, 1961) who found that capital related issues tended to receive significantly greater community support than operational issues.

Five variables were found to be meaningful in predicting voter support for successful property tax issues. The five variables were: (1) the percentage of ADC students, (2) the percentage of bond issues, (3) the percentage of continuous issues, (4) the percentage of games won in boys varsity basketball, and (5) the percentage of special elections. The five variables were negatively related to the dependent variable.

Prior research supports the logic that student socioeconomic background negatively influences community support for school financial

Table 10. Percentages of Games Won in Boys Varsity Football and Girls Varsity Basketball

	Boys Football		Girls Basketball	
Games Won	n	Percent	n	Percent
Did Not Participate	16	21.6	1	1.4
1.0 - 9.9	0	0.0	1	1.4
10.0 - 19.9	3	4.1	5	6.8
20.0 - 29.9	2	2.7	4	5.4
30.0 - 39.9	15	20.2	5	6.8
40.0 - 49.9	6	8.1	11	14.7
50.0 - 59.9	6	8.1	6	8.1
60.0 - 69.9	4	5.4	12	16.2
70.0 - 79.9	1	1.4	4	5.4
80.0 - 89.9	1	1.4	5	6.8
90.0 - 99.9	0	0.0	0	0.0
No Response	20	27.0	20	27.0
Totals	74	100.0	74	100.0

Mean=30.2 49.4 SD=24.2 22.1

Table 11. Percentages of Games Won in Boys Varsity Basketball and Boys Varsity Baseball

	Boys Basketball		Boys Baseball	
Games Won	n	Percent	n	Percent
Did Not Participate	1	1.4	1	1.4
1.0 - 9.9	0	0.0	0	0.0
10.0 - 19.9	2	2.7	2	2.7
20.0 - 29.9	4	5.4	5	6.8
30.0 - 39.9	4	5.4	12	16.2
40.0 - 49.9	13	17.6	13	17.5
50.0 - 59.9	18	24.2	13	17.5
60.0 - 69.9	7	9.5	6	8.1
70.0 - 79.9	4	5.4	1	1.4
80.0 - 89.9	1	1.4	1	1.4
90.0 - 99.9	0	0.0	0	0.0
No Response	20	27.0	20	27.0
Totals	74	100.0	74	100.0

Mean=48.9 49.7 SD=15.5 15.6

issues (Boskoff and Zeigler, 1964; Minar, 1966). There is also empirical evidence to indicate that as voter turnout decreases (as in the case of special elections) voter support also decreases (Rubinfeld and Thomas, 1980). Conventional wisdom reinforces the association between the dependent variable and the percentage of continuous issues. Certainly voters might be less supportive of tax increases which remain in effect for an indefinite period of time.

Explanations of why the percentage of games won in boys varsity basketball was meaningful in predicting election success might be limited to both community socioeconomic and administrative characteristics. Baker (1990) reported a moderate negative relationship between voter support and the percentage of students who entered an associate's degree program (rho=−.35). A moderate negative association was also found between voter support and cost per pupil (rho=−.40).

There appears to be little logic as to why the percentage of bond issues was found to be meaningful. Previous researchers have found just the opposite to be true (Minar, 1966; Carter and Savard, 1961). This independent variable may be carrying additional information which did not surface as a result of this study.

Figure 1 contains a model for predicting election success in rural Ohio school districts, based upon the stepwise analysis. Additional research is needed to support the chain of logic among a number of variables in the model.

Recommendations for the Improvement of Practice

The following recommendations are forwarded to state policy makers and rural school administrators.

State Policy Makers

(1) Approximately 39 percent of school financial issues were not supported by rural community members. State policy makers should give rural school board members the discretion to increase local property taxes for

Table 12. Associations Among the Percentage of Successful Property Tax Issues and Selected Community and School Characteristics (N=74)

	r^1
Percentage of ADC students	−.49
Average personal income	.32
Percentage of community members with 12 or more years of formal education	.32
Percentage of primary elections	−.14
Percentage of general elections	−.04
Percentage of special elections	−.31
Percentage of emergency new issues	.05
Percentage of continuous issues	−.18
Percentage of limited issues	−.07
Percentage of bond issues	−.30
Percentage of capital permanent improvement issues	.04
Percentage of emergency renewal issues	.16
Percentage of students entering a bachelor's degree program	.20
Percentage of students entering an associates degree program	.14
Percentage of students entering a technical program	−.07
Percentage of students entering military service	−.09
Percentage of students immediately employed	.06
Percentage of students unaccounted	−.35
Percentage of games won in boys varsity football	.04
Percentage of games won in girls varsity basketball	−.11
Percentage of games won in boys varsity basketball	−.23
Percentage of games won in boys varsity baseball	.09

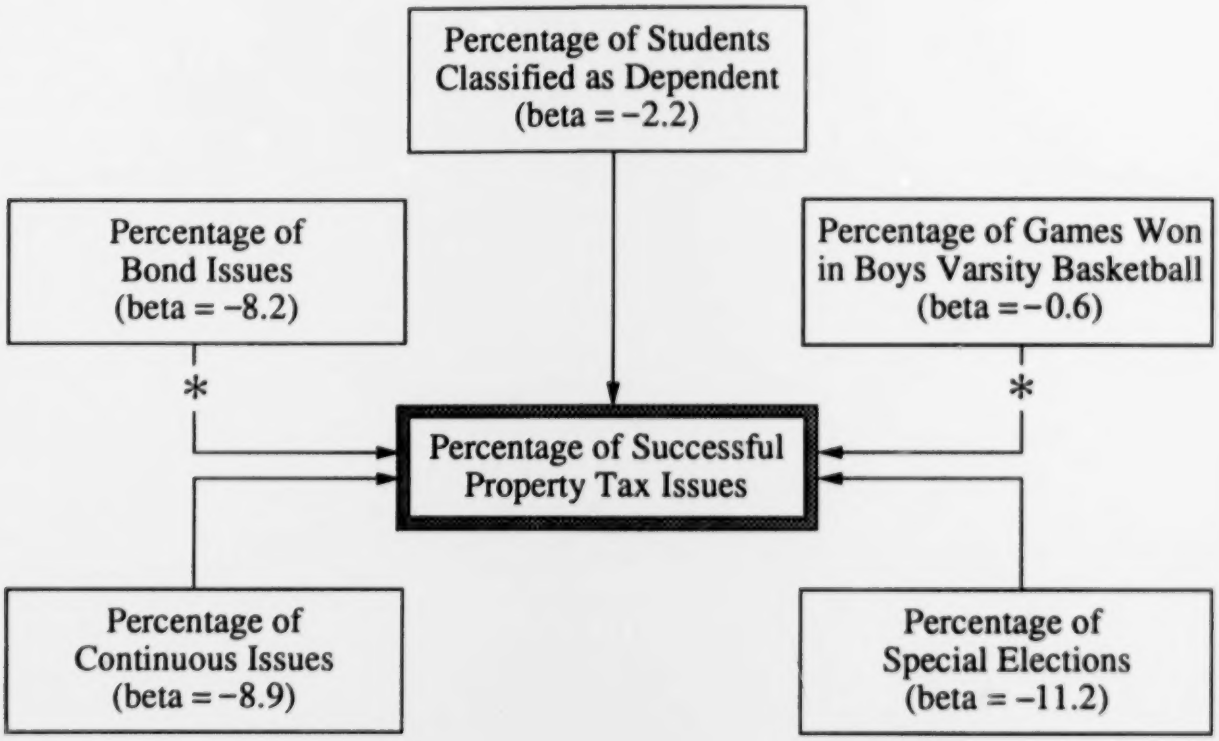
[1]Pearson Product Moment

Table 13. Regression of Successful School Finance Issues on Selected Independent Variables (N=74) (Stepwise Entry)

Variables	R2	R2change	b
Percentage of dependent students	.24	.24	−2.2
Percentage of bond issues	.34	.10	−8.2
Percentage of continuous issues	.42	.08	−8.9
Percentage of games won in boys varsity basketball	.48	.06	−0.6
Percentage of special elections	.53	.05	−11.2
Constant			123.1

Standard error=21.40
Adjusted R2=.49

Figure 1. Model for Predicting Success in Ohio Rural School District Property Tax Elections


Percentage of Students Classified as Dependent (beta = −2.2)
Percentage of Bond Issues (beta = −8.2)
Percentage of Games Won in Boys Varsity Basketball (beta = −0.6)
*
*
Percentage of Successful Property Tax Issues
Percentage of Continuous Issues (beta = −8.9)
Percentage of Special Elections (beta = −11.2)

* = Further research is needed to support the chain of logic among these variables and the Percent of Successful Property Tax Issues.

operational purposes without asking for voter approval. Such a policy might serve to strengthen the financial support of rural schools.

(2) A great deal of variance accounted for in the percentage of successful property tax issues was by the percentage of ADC students (a negative relationship). Districts with higher percentages of students from lower socioeconomic backgrounds have much less chance of passing school financial issues. Typically, these are the very districts with the greatest need of passing property tax issues. An examination of the state foundation funding program needs to be conducted to insure that districts of lower financial ability are properly compensated by the state funding system.

Rural School Administrators

(1) Ohio rural school district administrators should carefully consider the nature of voter behavior prior to placing issues on the ballot in special elections or advocating continuous issues. It appears that property tax issues conducted during primary and general elections, where there is typically a greater turnout of voters are most likely to be supported. Short-term emergency issues are most likely to be supported by rural community members.

(2) Administrators in rural Ohio school districts should improve career guidance services available to students and parents in

an effort to limit the discrepancy between advanced educational expectations and actual student entry into post-secondary educational programs.

(3) Rural school administrators should proactively advocate greater state and federal involvement in improving the finance system of capital facilities. Local community members seem to be unwilling to support capital facilities.

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